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ABSTRACT

As part of a multi-phase, Florida state-mandated study of state-wide higher education data resources and systems, this study focused on the use of student information for inter-sector policy analysis and decision making. In particular the question of whether to establish a master student-level database was explored. Through interviews with providers and consumers of information, problems were identified including a lack of formal communication, logistical and structural complexities of the data, difficulty in locating and using data, and limited access to data. Recommendations included: (1) rejection of the master student-level database plan; (2) establishment of formal communication between data producers and consumers; (3) production and maintenance of a user-friendly, menu-driven electronic system of current and historical information accessible by consumers of educational data; (4) designation of a data coordination group comprised of directors of management information systems; (5) allocation of resources to the offices for management information systems in each education sector to support increased data analysis services; and (6) a requirement that the data coordination group submit a report to the Florida State Postsecondary Education Commission. Appendixes contain a consultant's report and information on statutory authority on education information. (JB)

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Report and Recommendations of the Florida Postsecondary Education Planning Commission

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1994 - Report 2

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William B. Proctor, Executive Director

The Postsecondary Education Planning Commission, initially created by executive order in 1980, given statutory authority in 1981 (SS 240.145 and 240.147, Florida Statutes), and reauthorized by the 1991 Legislature, serves as a citizen board to coordinate the efforts of postsecondary institutions and provide independent policy analyses and recommendations to the State Board of Education and the Legislature. The Commission is composed of 11 members of the general public and one full-time student registered at a postsecondary education institution in Florida. Members are appointed by the Governor with the approval of three members of the State Board of Education and subject to confirmation by the Senate.

The major responsibility of the Commission is preparing and updating every five years a master plan for postsecondary education. The enabling legislation provides that the Plan "shall include consideration of the promotion of quality, fundamental educational goals, programmatic access, needs for remedial education, regional and state economic development, international education programs, demographic patterns, student demand for programs, needs of particular subgroups of the population, implementation of innovative educational techniques and technology, and the requirements of the labor market. The capacity of existing programs, in both public and independent institutions, to respond to identified needs shall be evaluated and a plan shall be developed to respond efficiently to unmet needs."

Other responsibilities include recommending to the State Board of Education program contracts with independent institutions; advising the State Board regarding the need for and location of new programs, branch campuses and centers of public postsecondary education institutions; periodically reviewing the accountability processes and reports of the public and independent postsecondary sectors; reviewing public postsecondary education budget requests for compliance with the State Master Plan; and periodically conducting special studies, analyses, and evaluations related to specific postsecondary education issues and programs.

Further information about the Commission, its publications, meetings and other activities may be obtained from the Commission office, 231 Collins Building, Department of Education, Tallahassee, Florida, 32399-0400; telephone (904) 488-7894; FAX (904) 922-5388.

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POSTSECONDARY EDUCATION PLANNING COMMISSION

EDUCATION INFORMATION REVIEW

Prepared in Response to
Chapter 94-232, Laws of Florida

1994 - Report 2

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January, 1995

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EXECUTIVE SUMMARY

In ***Challenges, Realities, Strategies: The Master Plan for Florida Postsecondary Education for the 21st Century*** (1993), the Commission stated that "popular support for higher education in Florida will depend to a large measure on the public's perception of how successfully postsecondary education satisfies widespread concern with educational productivity and quality output." ***Challenges, Realities, Strategies*** also emphasized the importance of Florida's education system functioning as a continuum and providing for the smooth transition of students from one level to another. The processes that manifest these two themes of accountability and articulation are highly dependent upon access to compatible and useful data for analysis, planning, and evaluation. Despite repeated calls for making information more useable and compatible across education sectors, no comprehensive initiative for cross-sector data reform has been sustained.

In Chapter 94-232, Laws of Florida, the 1994 Florida Legislature stated that:

The Postsecondary Education Planning Commission, in conjunction with the Florida Commission on Education Reform and Accountability, shall examine data that are currently reported by public schools, area vocational-technical centers, community colleges, and state universities. The commission recommendations should serve to reduce unnecessary or duplicative data, provide a means of articulating student data across all public education institutions, and yield useful information for analysis, evaluation, and planning at the state and local levels.

In recognition of the magnitude of the issues related to student data, efforts of other groups studying related issues, and the time frame and resources designated for this study, the Commission adopted a phased approach to the legislative charge. The first phase, from June through December, 1994, built on the Commission's 1984 study, ***A Study of Postsecondary Education Information***, by identifying impediments to previous attempts to establish a master student-level database (a database of individual student records), identifying problems in the current use of student data for intersector policy analysis and processes or mechanisms that would address those problems, and assessing the political and financial viability of implementing such processes or mechanisms. This phase also included development of a time line and detailed outline of the tasks and costs required for a comprehensive analysis of all student data elements as specified in Chapter 94-232, Laws of Florida. Conducting this analysis would form the second phase of study.

The current study focused on the use of student information for intersector policy analysis and decision making. This report represents a collaborative effort of the study consultant, Information Systems of Florida, and the Commission, in consultation with staff and the Oversight Committee of the Florida Commission on Education Reform and Accountability. A number of positive points that were made apparent during this study warrant recognition. First, Florida is one of the leading states in terms of amount and quality of data collected, maintained, and utilized at the state level. Second, both information providers and users expressed interest in improving the exchange of information for analysis. Third, identification of problem areas and ideas for solutions were remarkably similar for both the providers and users of information. Both recognized the need for information to be more accessible to policy analysts in Tallahassee, as well as the citizens of the State involved in addressing local education and employment issues.

Through interviews with providers and consumers of information, a number of issues relating to problems experienced with the use of data for intersector policy analysis were identified: a) lack of formal communication among the data producers and consumers, b) logistical and structural complexities of the data, c) difficulty in locating and using data, and d) limited access to data. Recommendations are set forth to address problems with the use of data for intersector policy analysis. Although the focus of the study is on state-level policy analysis, the recommendations also provide for future use of education information by decision makers at the institution or local level. Recommendations rely extensively upon the report submitted by the consultant, as well as public testimony and Committee discussion. The issues and recommendations are grouped according to the components of the study: 1) the feasibility of a master student-level database; 2) formal communication among the providers and consumers of information; 3) electronic access to reports/data and file transfers; 4) resources for coordination and analysis; and 5) comprehensive review of data elements.

Recommendations:

1. The Legislature should not pursue establishing a master student-level database. *The high cost for implementation, maintenance, and operation of a master database of individual student records would far outweigh its value.*

2. Formal communication should be established among the data producers and data consumers to facilitate the exchange of information and ideas concerning improvement in the management, quality, and use of data. *Meetings should occur at least annually and include Information Workshops and Data Request Conferences between the providers and consumers of data and Data Coordination Group Meetings among the data providers (program directors of the management information systems for the Divisions of Universities, Community Colleges, Applied Technology and Adult Education, and Public Schools and the Florida Education and Training Placement Information Program).*

3. The educational sectors and Florida Education and Training Placement Information Program should collaborate to produce and maintain a user-friendly, menu-driven electronic system of current and historical information that is accessible by the consumers of educational data. *This system should include the following capabilities: online directories, file transfers, electronic factbooks, and an electronic decision support system.*

4. The Department of Education should designate a Data Coordination Group comprised of the directors of management information systems for the Divisions of Universities, Community Colleges, Applied Technology and Adult Education, and Public Schools; the director of the Florida Education and Training Placement Information Program; and staff from the Postsecondary Education Planning Commission and the Florida Commission on Education Reform and Accountability. *The Data Coordination Group should host Information Workshops, Data Request Conferences, and Data Coordination Group Meetings; design and implement an electronic information system; and plan for future education information system needs. The Directors should serve on a rotating basis in the role of chairperson and content coordinator to set the agenda and preside over the meetings. A Commission staff member should serve as secretary and convener of the meetings. A staff member from*

the Florida Commission on Education Reform and Accountability should serve as a liaison to the Data Coordination Group concerning reform efforts in the public school sector.

5. Resources should be dedicated to the offices for management information systems in each education sector to support increased data analysis services for the consumers of education information. *(Resource requirements are detailed in the consultant's report, Appendix A.)*

6. The Data Coordination Group should submit a report to the Commission by January, 1996. *This report should detail: a) the procedures by which the sectors review, delete, add, or modify student data; b) any duplication of reporting; c) any unnecessary collection of data; and d) progress made toward modifying data to enhance longitudinal and intersector analysis of data. If analysis of the report to the Commission indicates that an external review of all data elements and reporting requirements is warranted for any or all of the education systems, resources should be requested to support such a review.*

I. INTRODUCTION

In Chapter 94-232, Laws of Florida, the Florida Legislature stated that:

The Postsecondary Education Planning Commission, in conjunction with the Florida Commission on Education Reform and Accountability, shall examine data that are currently reported by public schools, area vocational-technical centers, community colleges, and state universities. The commission recommendations should serve to reduce unnecessary or duplicative data, provide a means of articulating student data across all public education institutions, and yield useful information for analysis, evaluation, and planning at the state and local levels. The commission shall convey its report and recommendations to the Legislature no later than January 31, 1995. At a minimum, the report shall include the following:

1. A delineation of current reported data elements that identifies the specific requirement by which such data must be reported.

2. A delineation of current reported data elements for which no known reporting requirement exists.

3. A delineation of current reported data elements that appear to be duplicative.

4. A delineation of current reported data elements that appear to conflict with one another.

5. An evaluation of the extent to which current reported data elements are meaningful for state and local analysis, evaluation, and planning purposes.

6. An evaluation of the feasibility of developing a master student-level database that incorporates all public educational institutions, including identification of the cost of developing such a database.

7. An identification of the short-term and long-term costs or cost savings associated with implementation of the commission's recommendations.

In recognition of the magnitude of the issues related to student data, efforts of other groups studying related issues, and the time frame and resources designated for this study, the Commission adopted a phased approach to the legislative charge. The first phase, from June through December, 1994, built on the Commission's 1984 study, ***A Study of Postsecondary Education Information***, by identifying impediments to previous attempts to establish a master student-level database (a database of individual student records), identifying problems in the current use of student data for intersector policy analysis and processes or mechanisms that would address those problems, and assessing the political and financial viability of implementing such processes or mechanisms. This phase also included development of a time line and detailed outline of the tasks and costs required for a comprehensive analysis of all student data elements as specified in Chapter 94-232, Laws of Florida. This analysis will form the second phase of study in 1995.

The Chairman of the Commission assigned the Finance/Administration Committee to oversee this study. Ivie Burch chaired the Committee; other members were Vilma Diaz, Robert Mautz, Karen Plunkett, Michael Roberts, and Mark Wheeler. The Finance/Administration Committee met six times between June 1994 and January 1995 to discuss information collected for the report and receive public testimony. The Commission contracted the consulting firm, Information Systems of Florida, to identify impediments experienced in

previous attempts to establish a master student-level database, identify problems with the current use of student data for intersector policy analysis, define mechanisms to address obstacles within intersector policy analysis, assess the political and financial cost/viability of implementing such mechanisms, and develop a timeline and detailed outline of tasks with related costs required for a comprehensive analysis of all student data elements as specified in Chapter 94-232, Laws of Florida. The Commission worked in conjunction with staff from the Florida Commission on Education Reform and Accountability and presented a draft of its findings to the Oversight Committee for review and discussion. The Commission utilized a resource group representing the State University System, Division of Community Colleges, Division of Applied Technology and Adult Education, Division of Public Schools, and the Florida Education and Training Placement Information Program. Information concerning problems with the current use of data for intersector policy analysis and possible solutions was solicited from analysts representing education, the Legislature, the Governor's office, and the Office of Program Policy Analysis and Government Accountability.

The consultant's report was submitted to the Finance/Administration Committee in December and guided the Committee in the development of its final report to the full Commission. The consultant's report appears in Appendix A.

Background Information

In ***Challenges, Realities, Strategies: The Master Plan for Florida Postsecondary Education for the 21st Century*** (1993), the Commission stated that "popular support for higher education in Florida will depend to a large measure on the public's perception of how successfully postsecondary education satisfies widespread concern with educational productivity and quality output." ***Challenges, Realities, Strategies*** also emphasized the importance of Florida's education system functioning as a continuum and providing for the smooth transition of students from one level to another. The processes that manifest these two themes of accountability and articulation are highly dependent upon access to compatible and useful data for analysis, planning, and evaluation.

The history of efforts to improve the compatibility and usefulness of educational data parallels the interest of improving accountability and articulation. For example, in the mid-1970s, the Legislature passed the Educational Accountability Act of 1976 (Chapter 76-223, Laws of Florida) which provided for information to be supplied "to the public about the performance of the Florida system of public elementary and secondary education in meeting established goals and providing effective, meaningful, and relevant educational experiences designed to give students at least the minimum skills necessary to function and survive in today's society." Within the legislation, the Commissioner of Education was directed to:

develop and implement an integrated information system for educational management. The system shall support, as feasible, the management decisions to be made in each division of the department and at the individual school and district levels. Similar data elements among divisions and levels shall be compatible. The system shall be based on an overall conceptual design; the information needed for such decisions, including fiscal, student, program, personnel, facility, community, evaluation, and other relevant data; and the relationship between costs and

effectiveness. (Chapter 76-223, Laws of Florida)

The legislation provided for a management information system to be managed and administered by the Commissioner and district subsystem components to be administered at the local level.

In 1984, the Commission reported in ***A Study of Postsecondary Education Information*** that an extensive amount of information was produced by postsecondary institutions and systems. Major shortcomings, however, existed with this information including the lack of comparability across sectors and its intentional support of the budget process rather than planning and evaluation processes. Analysis of existing education information systems and databases revealed a need for the collection of student level data in the public schools and database management software to provide an integrated database and enhanced student-level data for vocational education and community colleges.

In its report, the Commission recognized that information to support planning and policy analysis requires coordination by a single source and recommended the establishment of an information clearinghouse, assigned to the Office of the Commissioner of Education, to ensure compatibility of data in existing systems through standard definitions, the assembly of data from these systems for use by policymakers, and the provision of recurring reports on postsecondary education, and eventually, on all levels of education in Florida. The Commission also identified and analyzed the costs involved in establishing a clearinghouse. Although $250,000 was initially appropriated in 1985 to establish the clearinghouse, the Florida Center for Educational Statistics (Section 229.552, Florida Statutes), the project lacked widespread support and was not fully implemented by the Office of the Commissioner. Statutory authority was repealed in 1991 (Chapter 91-105, Laws of Florida).

More recently, problems with the compatible use of data across education sectors were again identified in relation to vocational education in the State. The 1990 Legislature provided funding to the Department of Education's Division of Vocational, Adult, and Community Education (DVACE), recently renamed the Division of Applied Technology and Adult Education, for a study of Florida's vocational education and technical training system "to establish a basis for alignment of responsibilities and resources which will best serve Florida's educational and economic needs." In consultation with the Department of Education and a Technical Advisory Group comprised of staff from the Legislature and Governor's office, MGT of America compiled and synthesized information concerning Florida's vocational education system. MGT noted in its report, ***A Study of Florida's Vocational Education and Technical Training System*** (1991), that state level administration for vocational education in Florida continued to be the responsibility of several divisions within the Department of Education, and management information systems across divisions and delivery systems were often incompatible, resulting in data which, in some cases, were not complete or accurate. In addition, vocational enrollment figures reported by the Department of Education are duplicated headcounts; thus, the reported number of enrollees exceeds the actual number of individual students in vocational programs. An unduplicated count of students enrolled in vocational programs was not available. Furthermore, MGT reported that differing definitions of enrollments were used by school districts and community colleges.

In an interagency initiative between 1989 and 1991, the Allied Health Articulation Task Force, co-funded by the Legislature and federal Carl Perkins monies, addressed data collection and use among a wide array of state agencies. The Task Force studied ways in which the utility of existing state databases could be improved, focusing on improving the flow and compatibility of data, developing a model for the optimum flow of data to prevent duplication and improve coordination, and determining the resources required to implement the model. As a result of the Task Force's efforts, some improvements were achieved on a voluntary basis, yet funding was not provided for full implementation of this model.

Through proviso language in the 1989 General Appropriations Act, the Florida Legislature created the Automated Education Information Commission (AEIC) with representation from each education sector to ensure statewide coordination of all automated educational computerized systems and networking. During its initial years, the AEIC reviewed statutory requirements in relation to automated information and adopted a set of principles to ensure statewide coordination. In its annual report, it focused on the review of strategic plans and coordinating mechanisms that exist to ensure cooperative results. In recent years, the AEIC's efforts have focused on updating the annual report rather than resolution of ongoing information compatibility issues.

Despite repeated calls for making information more useable and compatible across education sectors, no comprehensive initiative for cross-sector data reform has been sustained. The reasons behind the lack of response are not entirely clear since the interest remains constant, but cost, magnitude of effort, role of the sector boards, original purposes for collecting data, and territoriality most likely contribute.

A number of initiatives are currently addressing issues relating to student data. Examples include:

- collaboration between the Commission on Education Reform and Accountability and the Department of Education to develop comprehensive assessments in the seven goal areas contained in *Blueprint 2000* and in regard to assessment, definitions of adequate progress, benchmarks, data collection, and reporting;

- an appropriation to the Florida Information Resource Network (FIRN) of $4.25 million for two-year institutions and the Division of Community Colleges to comply with the 1987 proviso requiring the development and integration of student, staff, and financial databases; and

- proviso language directing the Commission to review and evaluate accountability plans in public postsecondary education as they relate to the state goals for postsecondary education.

This study examines the use of student information for intersector policy analysis and decision making. Chapter II describes the methodology employed in the study. Chapter III identifies issues and Commission recommendations pertaining to student data in the public sectors of education.

II. METHODOLOGY AND FINDINGS

This study is concerned with improvements in the use of student data for intersector policy analysis for such purposes as the study, both immediate and longitudinal, of articulation and accountability issues. The databases for the public sectors of education were developed independent of one another and designed to meet the needs of their respective budget processes. Consequently, they are funding driven, rather than designed to meet current interests for planning and evaluation. The call for improved data for planning and evaluation has coincided with the phenomena of budget constriction. Examples of efforts to make the best use of available resources include treating education as a unified system and moving toward performance-based and incentive funding methodologies.

The Commission contracted a private consulting firm, Information Systems of Florida (ISF), to assist with analysis of the problem, explore solutions, and examine the financial and political feasibility of potential policy options. Specifically, ISF was contracted to:

- Identify impediments experienced in previous attempts to establish a master student-level database (a database of individual student records),
- Identify problems in the current use of student data for intersector policy analysis,
- Define a mechanism to address the identified obstacles within intersector policy analysis,
- Assess the political and financial viability of implementing such mechanisms,
- Develop a timeline and a detailed outline of tasks with related costs required for a comprehensive analysis of all student data elements as specified in Chapter 94-232, Laws of Florida.

Information for this study was gathered primarily through structured individual and group interviews with the providers of information (Program Director of Education Information and Assessment for the Division of Public Schools, Program Director of Planning and Information Management for the Division of Applied Technology and Adult Education, Bureau Chief of Research and Information Systems for the Division of Community Colleges, Associate Director for Information Resource Management for the Division of Universities, and Program Director for the Florida Education and Training Placement Information Program) and the consumers of information (analysis staff from the Governor's office, legislative substantive and appropriations committees, the Commission office, Department of Education, and Office of Program Policy Analysis and Government Accountability). (A list of providers and consumers is provided in the consultant's report, Appendix A.) Additional information was found in the Commission's report, ***A Study of Postsecondary Education*** (1984), ***Challenges, Realities, Strategies: The Master Plan for Florida Postsecondary Education for the 21st Century*** (1993), annual reports from the Automated Education Information Commission, reports from School Year 2000, reports from the Office of Program Policy Analysis and Government Accountability, and the Florida Statutes (See Appendix B for ***Statutory Authority Concerning Education Information***).

Initial interviews with the directors of management information systems for the Divisions of Public Education, Applied Technology and Adult Education, Community Colleges, and Universities were conducted by Commission staff for background information. Table 1 provides a summary of their information systems, coordination efforts, analysis of problems, and suggestions for solutions to address problems. Similar interviews were held with representatives from the two state-level boards for postsecondary education in the private sector, the State Board of Independent Colleges and Universities and the State Board of Independent Postsecondary Vocational, Technical, Trade, and Business Schools. Table 2 provides a summary of their information systems, which currently collect aggregate student information, but not individual student data. Effective in 1995, member institutions of the Independent Colleges and Universities of Florida (ICUF) will submit select student information to ICUF for the purpose of addressing accountability issues.

Following initial background interviews with the sector information providers, Commission staff and representatives from ISF conducted another set of individual interviews with the providers, including the program director of the Florida Education Training and Placement Information Program, and group interviews with data consumers. Information from these interviews was consolidated into provider and consumer summaries and presented to the five providers of information during a day-long workshop. The consolidated summaries were reviewed, and a list of potential solutions was generated from group discussion during the workshop. ISF analyzed these potential solutions in terms of effectiveness and financial and political feasibility. The findings and recommendations from the consultant's report were considered as the Commission formed its recommendations and are detailed in their report (Appendix A).

TABLE 1

INFORMATION RELATING TO THE FOUR PUBLIC EDUCATION DATABASES

QUESTIONS	DATAE	DPS	DCC	SUS
Purpose of Database	-Accountability -Program improvement (general focus on analyses) -Federal reporting	-State reporting/ funding -Federal reporting -Output/Evaluation Reporting	-State reporting/ funding -Federal reporting (IPEDS) -Accountability -Student Tracking -Vocational Student Follow-up	-Funding by student credit hours; -Monitoring policies (output); -Federal reporting (IPEDS) -Accountability -Program Review/ Evaluation -Research/Analysis
Where Stored **How Accessed** **How Analyzed**	NWRDC FIRN SPSS for PC; COBOL QMF	NWRDC FIRN SAS,SPSS,COBOL, QMF	NWRDC FIRN SAS, some COBOL, QMF	NWRDC and NERDC (disaster security) FIRN SAS,COBOL,QMF Mark 4
Updating Process	Arbitrator between districts; Workshops (state and regions); Committees	Annual review process involving district and department staff.	Annual review process involving institutions and DCC staff; Workshop in July	Review process involving institution and board office committees; 3-day workshop in July.
Efforts to Reduce Reporting Requirements	-Minimize number of elements -Look for efficiency on elements -Deal with formats, rather than reports	Through updating process, address concerns to: reduce data, limit duplication, and seek alternative sources of data.	Automation has reduced reporting requirements on institutions; Recommend legislation to delete "useless" reports; Design reports for efficiency	Can check how often an element is used and eliminate any unused overtime; reporting requirements can be shifted elsewhere or eliminated through administrative procedure.

TABLE 1

INFORMATION RELATING TO THE FOUR PUBLIC EDUCATION DATABASES (cont.)

QUESTIONS	DATAE	DPS	DCC	SUS
Current Initiatives	-Performance Based Funding (PBF) - Blueprint 2000/ Accountability -Program profile -Consensus performance measures	Comply with data needs for Florida School report; special studies; provide management files, e.g., Bureau of Exceptional Students.	Accountability reporting; Special appropriation to improve databases	Special appropriation for development of student and staff databases (DB2)(3-year).
Coordination Efforts	AEIC IATF (Interagency Task Force on the Interdependent Use of Data)	-AEIC -Records Transfer -Laws/rules separate sectors	-FIRN -AEIC -MICOE -IATF -Other sectors and external agencies	FIRN;AEIC; Coordinate work with DCC, share copy of student data, DCC designed their system similar to SUS where possible.
Intersector Uses of Data	Coordinator with SBCC for: -PBF, Allocation of Perkins funds; -Development of performance measurement system and method of targeting -FETPIP	-FETPIP -SUS/DCC aggregate information -Sharing data across districts to find "missing" students	-DPS-Dropout Prevention -OPEC-Readiness for College Report -SUS-student follow-up -Auditor General - audit area -HRS/DBPR licensing -FETPIP	-DCC gets copy of student data -Auditor General for accountability verification -FETPIP
Analysis of Problems	Data definitions differences	- Different calendar for reporting -Legislative funding differences	-Different reporting requirements -Concern for security of student data (confidentiality)	Concern for security of student data (confidentiality and protection)

TABLE 1

INFORMATION RELATING TO THE FOUR PUBLIC EDUCATION DATABASES (cont.)

QUESTIONS	DATAE	DPS	DCC	SUS
Changes that Could be Helpful	-Greater coordination/ consistency (for analytical advantages) -Organizational change in delivery system -Increase staffing (FL School Report added to MIS burden)	Trying to work "smarter," agreement with FIRN so analysts can use DOE mainframe when needed; need additional system support (inservice) for "users" to help managers become analysts; interest in extending longitudinal tracking to postsecondary level; building stronger focus on analysis, more process oriented; need additional staff	-Flexibility with funding to deal with human resource problems and the way monies are spent (movement between funding categories) -Resources for staff training	-Completion of student database development; - Funding will become a greater issue; -Resources for staff training in use of new technology.

TABLE 2

INFORMATION RELATING TO THE TWO INDEPENDENT POSTSECONDARY EDUCATION SECTOR DATABASES

QUESTIONS	SBICU	SBIPVTTBS
Purpose of Database	-Institution, program, and aggregated student data -State reporting (no federal) -Data collection is independent task, not part of licensure process	-Institutional data only; no individual student data -Licensure of institutions/programs -Repository for institutional/program data -State reporting (no federal)
Where Stored	-SBICU office; automated; PC -FIRN (temporarily not on FIRN)	-SBIPVTTBS office; automated -Dial-up capability to FIRN -Adding direct connection to DOE network via NWRDC
Updating Process	-Annual administrative process to revise data request form (500 form) and collect information from institutions	-On-going administrative process; application/renewal forms, Board action, correspondence
Efforts to Reduce Reporting Requirements	-Utilize IPEDS data when possible	-Automated system used to generate reports
Current Initiatives	-SPRE participation -Future interest in collaborative work with FETPIP	-Received OCO funds (1994) for upgrading system; -Coordinate placement project with FETPIP -SB1710 - increased authority for student protection fund -SPRE participation
Coordination Efforts	-Bureau of Career Development	-Coordinate placement project with FETPIP and individual institutions -DATAE; FLOIS; Career Development; DLES
Intersector Uses of Data	-Bureau of Career Development -Office of Student Financial Assistance -SUS information sharing	-Requests for institution/program data; -DATAE information sharing
Analysis of Problems	-Different data definitions	-High workload demand on few staff
Changes that Could be Helpful	-Electronic hook-up -Potential need for further automation for SPRE -Possible alliances with other sectors for completing data tasks	-Potential need for further automation and staff for student protection plan or SPRE

III. ISSUES AND RECOMMENDATIONS

The Legislature directed the Commission to conduct a comprehensive analysis of all data elements and reporting requirements for the public sectors of education and to determine whether a master student-level database (a database of individual student records) would improve the use of education data for intersector policy analysis to address such issues as articulation and accountability. This report represents a collaborative effort of the study consultant, Information Systems of Florida, and the Commission, in consultation with the staff and Oversight Committee of the Florida Commission on Education Reform and Accountability. Recommendations are set forth to address problems with the use of data for intersector policy analysis. Although the focus of the study is on state-level policy analysis, the recommendations also provide for future use of education information by decision makers at the institution or local level.

A number of positive points that were made apparent during this study warrant recognition. First, Florida is one of the leading states in terms of amount and quality of data collected, maintained, and utilized at the state level. Second, both information providers and users across the board expressed interest in improving the exchange of information for analysis. Third, identification of problem areas and ideas for solutions were remarkably similar for both the providers and users of information. Both recognized the need for information to be more accessible to policy analysts in Tallahassee, as well as the citizens of the State who are interested in addressing local education and employment issues.

This section presents issues and recommendations of the Commission, relying extensively upon the report submitted by the consultant, as well as public testimony and Committee discussion. Discussion of the issues, recommendations, and the financial and political viability of recommendations is provided in greater detail in the consultant's report (Appendix A). The issues and recommendations are grouped according to the components of the study: 1) the feasibility of a master student-level database; 2) formal communication among the providers and consumers of information; 3) electronic access to reports/data and file transfers; 4) resources for coordination and analysis; and 5) comprehensive review of data elements.

Feasibility of a Master Student-Level Database

In Chapter 94-232, Laws of Florida, the Legislature directed the Commission to evaluate the feasibility of developing a master student-level database that incorporates all public educational institutions. The master database would house all state-level, individual student data and provide a single source of information to meet the policy and budget analysis and planning needs of the Legislature, the Governor's office, the State Board of Education, the Commission, and other state groups. During the current study, opposition to the development of a master student-level database was pervasive. A number of predominant deterrents to establishing a master student-level database were expressed and included:

- perceived need for the education sectors to retain data for their internal use, thus necessitating duplication,
- data privacy issues,
- differences in reporting cycles and requirements for each education sector, and

- vast increase in the time and cost involved in maintaining and operating a centralized database because of the increased volume of stored data.

It was determined that the high cost for implementation, maintenance, and operation of a master database of individual student records would far outweigh its value as perceived by staff in the education sectors, Legislature, and Governor's office.

Recommendation:

1. The Legislature should not pursue establishing a master student-level database. *The high cost for implementation, maintenance, and operation of a master database of individual student records would far outweigh its value.*

Formal Communication

As consumers of data, state-level policy analysts identified numerous problems that occur when trying to use data provided by the educational sectors for policy analysis. These problems included complicated data collection systems, limited access to data and reports, and low priority and long response time for external requests. The providers of information reported problems when trying to respond to external data requests, including requests that would result in personally-identifiable information and unrealistic expectations of the databases in terms of capabilities and response time.

Persons interviewed sought better understanding and improved quality of data and fewer ad hoc and more structured, scheduled interaction between the data providers and consumers. To address the identified problems with and interest for improved understanding and quality, increasing and formalizing the communication between the providers and consumers is needed. This can be accomplished through Information Workshops and Data Request Conferences. The purpose of the Information Workshops would be to enhance the consumers' knowledge of the collection, structure, complexities, and capabilities of the data and allow providers to receive feedback concerning problems that the information consumers are experiencing. Data Request Conferences could be used to inform data providers of specific and anticipated requests for data that will be needed to support policy issues that will be addressed in upcoming legislative sessions or as a result of legislative assignments. The providers in turn would have the opportunity to clarify data capabilities and time needed to adequately respond to such requests.

In addition to improving communication between providers and consumers, it was determined that increasing and formalizing the communication among the providers of information is needed. Although informal interaction occurs among providers, it is sporadic and typically limited to the interaction of two of the providers at any given time rather than all of the directors of the sector management information systems and Florida Education and Training Placement Information Program as a group. Currently, no formalized process exists to accomplish such interaction, even though the providers acknowledged the value of past processes. This could be accomplished through Data Coordination Group Meetings. During Data Coordination Group Meetings, the providers would address common, sector-wide concerns to enhance the use of data for intersector policy analysis, address consumer concerns, and plan for the future data, information, and technology needed for improving education decision and policy making for the State.

Recommendation:

2. Formal communication should be established among the data producers and data consumers to facilitate the exchange of information and ideas concerning improvement in the management, quality, and use of data. *Meetings should occur at least annually and include Information Workshops and Data Request Conferences between the providers and consumers of data and Data Coordination Group Meetings among the data providers (program directors of the management information systems for the Divisions of Universities, Community Colleges, Applied Technology and Adult Education, and Public Schools and the Florida Education and Training Placement Information Program).*

Electronic Access

With the availability of greater technological sophistication, information consumers expressed interest in desktop, electronic access to data. The complexity of their requests ranged from being provided with an online directory of available reports and information to being provided with online access to raw data stored at the Northwest Regional Data Center. Requests for decision support systems require data providers to move beyond just tapping data to providing and converting data into information useful to planning and analysis. The following are capabilities of an electronic information system that could be developed to meet consumer needs:

- **Online Directories** of data elements and reports would facilitate determining what data and reports currently exist and where they are located. The directories could be made available on the Florida Information Resource Network (FIRN) as part of a larger electronic information system (discussed below). Easy access to an online directory is a key factor in the level of use. The online directories would include indices of reports that are available, the type of data conveyed in the report, and lists of data elements that are collected. Having online directory search function capability could expedite the process of locating report titles or data element names.

- **Electronic File Transfers** would expedite information exchanges between data producers and consumers. Electronic file transfers would allow consumers not only to access data but also to determine whether adjustments are needed in the manner that the data are requested or organized. Requesting data and refining data requests electronically, rather than in the traditional manner of hard copy form, would reduce the amount of paperwork required and expedite the exchange and analysis processes.

- **Electronic Factbooks** would expedite the availability of standard information reported in each of the sector's factbooks. Factbook information would be accessible electronically with the functionality of search, cut, and paste capabilities to better use the data presented. An electronic factbook could also be updated to provide current as well as historical data at the time when information is completed rather than at an annual publication date.

- **Electronic Decision Support System** would incorporate query capabilities on select sets of data or reports and would provide summary data in varying levels (in compliance with privacy laws). An electronic information system could be designed to avail educational statistics to the public for analysis of institutional effectiveness and articulation and accountability, yet restrict the availability of raw, student-record information. As more than one of the data providers were considering the development of an electronic management information system for their

agencies, a collaborative effort among the data producers to develop a statewide electronic education information system would allow for greater consistency of information and ease of use.

Recommendation:

3. The educational sectors and Florida Education and Training Placement Information Program should collaborate to produce and maintain a user-friendly, menu-driven electronic system of current and historical information that is accessible by the consumers of educational data. *This system should include the following capabilities: online directories, file transfers, electronic factbooks, and an electronic decision support system.*

Resources for Coordination and Analysis

Among the more controversial points of this study was the need to provide for additional meaningful analysis of data and for meeting the demand for this service. Possibilities considered included creating a master student-level database, establishing a data clearinghouse external to education sectors, transferring the analysis responsibility to an existing agency currently providing related decision support information, and creating a staff of cross-sector analysts to address the information gaps in student data. From the possibilities considered, one strategy emerged as integral to providing for additional, meaningful analysis. The strategy calls for an organizational structure that would ensure the implementation of the processes designed to improve communication, coordination, and access as addressed in the previous recommendations.

The strategy involves establishing a Data Coordination Group composed of data providers to ensure the occurrence of the Information Workshops, Data Request Conferences, and Data Coordination Group Meetings (discussed above), the design and implementation of an electronic information system, and the planning for future education information system needs. To permit the data providers opportunity to focus on the substantive and technical aspects of improving access to and analysis of data for sector and intersector policy analysis, the Commission believes that an entity external to the providers, yet knowledgeable of the issues at hand, could oversee the functions necessary to organize and serve as a catalyst for the necessary gatherings of providers and consumers. Among the external entities considered to serve in this role were the Florida Information Resources Network (FIRN), the Data Center, the Office of Postsecondary Education Coordination, the Commissioner's office, the Florida Commission on Education Reform and Accountability, the Florida Education and Training Placement Information Program, the Joint Legislative Management Committee, and the Commission.

The Commission believes that the five data providers and a staff member from the Commission should be designated as the Data Coordination Group with the Commission staff member serving in the secretarial and convener role to assist in the efforts to improve access and analysis of data. The providers could serve on a rotating basis in the role of chairperson and content coordinator to set the agenda and preside over the meetings. In addition, to ensure coordination with the reform efforts in the public school sector, a staff member of the Florida Commission on Education Reform and Accountability could serve as a liaison to the Data Coordination Group.

Secondary to establishing the Data Coordination Group is ensuring resources to the education sectors adequate for analysis services. Resource requirements will change as electronic systems are designed and implemented and may vary among the education sectors. Resources are needed by the education sectors to respond to requests for information services with staff skilled to assist with the data analysis workload and may include software, equipment, staff training, realignment of current resources, or additional staff. Resources ought to be built into the sectors' requests for funding and dedicated to responding to consumers' requests to perform additional analysis and ad hoc queries and serving the functions of maintaining the electronic information system and performing file transfers.

Recommendations:

4. The Department of Education should designate a Data Coordination Group comprised of the directors of management information systems for the Divisions of Universities, Community Colleges, Applied Technology and Adult Education, and Public Schools; the director of the Florida Education and Training Placement Information Program; and staff from the Postsecondary Education Planning Commission and the Florida Commission on Education Reform and Accountability. *The Data Coordination Group should host Information Workshops, Data Request Conferences, and Data Coordination Group Meetings; design and implement an electronic information system; and plan for future education information system needs. The Directors should serve on a rotating basis in the role of chairperson and content coordinator to set the agenda and preside over the meetings. A Commission staff member should serve as secretary and convener of the meetings. A staff member from the Florida Commission on Education Reform and Accountability should serve as a liaison to the Data Coordination Group concerning reform efforts in the public school sector.*

5. Resources should be dedicated to the offices for management information systems in each education sector to support increased data analysis services for the consumers of education information. *(Resource requirements are detailed in the consultant's report, Appendix A.)*

Comprehensive Review of All Data Elements and Reporting Requirements

The second phase of this study as specified in Chapter 94-232, Laws of Florida, to be completed in 1995, includes a comprehensive analysis of all student data elements and reporting requirements. The consultant estimated the duration and scope of completing the second phase to entail a study of six months duration and at a cost of approximately $130,000. A detailed outline of the tasks and costs required for the comprehensive analysis of all student data elements as specified in Chapter 94-232, Laws of Florida, is included in the consultant's report (Appendix A). It should be noted, however, that based on the information collected in preparation for this study, the consultant concluded that completing the second phase of the study would be a costly endeavor that would provide for only moderate improvement in each sector's ability to provide useful information for analysis, evaluation, and planning at the state and local levels.

As envisioned, the second phase of the study will require the Commission to conduct a comprehensive analysis of the data elements and reporting requirements of the educational sectors to reduce unnecessary or duplicate data and to increase the articulation of student data across all public education institutions. As

reported in this study, current problems with providing data for analysis, evaluation, and planning are concentrated in the areas of poor communication, differing operational environments, and data privacy issues. Issues such as collecting too much or unnecessary data, or the need to collect additional data to provide more in-depth information about intersector concerns were discussed but never identified as existing impediments to providing more comprehensive educational data. In addition, members of the Florida Commission on Education Reform and Accountability reported that their commission is currently engaged in a review of all data elements associated with its work.

Each education sector currently conducts an annual review of the data collected and makes adjustments to the data as needed. These annual reviews currently meet the needs for eliminating duplicative reporting requirements and adding data to provide useful information. Additionally, the activities for the Data Coordinating Group (discussed above) have the potential to resolve many of the problems that currently exist with using student data for policy analysis.

Nevertheless, to ensure this issue is adequately resolved, the Data Coordination Group could be requested to submit a report to the Commission by January, 1996 that details:

- the procedures by which the sectors review, delete, add, or modify student data;
- any duplication of reporting;
- any unnecessary collection of data; and
- progress made toward modifying data to enhance longitudinal and intersector analysis of data.

Given the level of increased communication, access to data, and the focused efforts of the data providers to improve information provided to the consumers, the need for a comprehensive analysis at this time is perceived as unnecessary. Should analysis of the report to the Commission in January, 1996 indicate that an external review of all data elements and reporting requirements is warranted for any or all of the education sectors, resources could then be requested to support an external review.

Recommendation:

6. The Data Coordination Group should submit a report to the Commission by January, 1996. *This report should detail: a) the procedures by which the sectors review, delete, add, or modify student data; b) any duplication of reporting; c) any unnecessary collection of data; and d) progress made toward modifying data to enhance longitudinal and intersector analysis of data. If analysis of the report to the Commission indicates that an external review of all data elements and reporting requirements is warranted for any or all of the education systems, resources should be requested to support such a review.*

Discussion of Information External to Public Education

The Commission recognizes the growing demand for information and interest in interfacing with databases other than those in public education in the future. For example, the Commission has historically advocated the inclusion of independent colleges and universities in planning to meet the postsecondary education needs of the State. The two state-level boards for independent postsecondary education (State Board for Independent Colleges and Universities and State Board for Independent Postsecondary

Vocational, Technical, Trade, and Business Schools) do not collect individual student data. The institutions affiliated with the Independent Colleges and Universities of Florida (ICUF) are moving toward reporting aggregated student data for the measurement of accountability issues. Each of the boards does supply some data for state planning and policy making, responding to administrative rules and statutes, and analyzing workforce placement of program completers. Furthermore, given the interest in education reform, vouchers, and initiatives such as charter schools, attention may be warranted for the collection of data from private and independent programs in the pre-K-12 sectors.

Additionally, the ability to access through electronic media increasing amounts of information seems to result in the demand for additional information. For example, a number of projects currently connect the databases in the Department of Education with those in the Department of Health and Rehabilitative Services for the analysis of the educational progress of at-risk students and with the Department of Labor and Employment Security and the Department of Business and Professional Regulation for analysis of workforce placement and licensure attainment. Demand will most likely increase for supplementing the analysis of educational issues with information that is accessed electronically from external agencies concerning population demographics, education reform efforts, workforce supply and demand, and professional licensure. Electronic connections with entities external to public education will, therefore, become increasingly important to the exchange of information. The inclusion of data from entities external to public education needs to be considered when planning the State's future information system needs.

Conclusion

The 1994 Legislature directed the Commission to study ways to improve the use of student data for policy analysis and decision making, focusing on the use of data across the public education sectors. Through interviews with providers and consumers of information, a number of issues relating to problems experienced with the use of data for intersector policy analysis were identified: a) lack of formal communication among the data producers and consumers, b) logistical and structural complexities of the data, c) difficulty in locating and using data, and d) limited access to data. While in the past interest has been expressed in creating a master student-level database, the Commission believes that the cost of such a database would far outweigh any potential benefit to the State. This report calls for increasing and formalizing communication among the providers and consumers of information, designing electronic access to reports and data and allowing file transfers, and designating a group to be responsible for implementing the recommendations of this report.

Appendix A

CONSULTANT'S REPORT

Postsecondary Education Planning Commission
Education Information Review

November 23, 1994

Information Systems of Florida, Inc.
9550 Regency Square Boulevard, Suite 1240
Jacksonville, Florida 32225
(904) 724-2277

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1.0 EXECUTIVE SUMMARY

The 1994 Legislature, through Senate Bill 1018, directed the Postsecondary Education Planning Commission (PEPC) to perform a study of the use of student data and the viability of developing a master student database. This report is the culmination of research performed by Information Systems of Florida, Inc. (ISF) for PEPC that addresses the first part of a two-part study. This report identifies impediments to attempts by the state in 1984 to establish a master student-level database and makes recommendations on how to overcome the existing barriers of using student data for intersector policy analysis. The second part of the desired study is to address the redundancy of student data collection systems across sectors.

Through interviews with the users and producers of Florida public-sector student data, ISF determined that there were four major impediments to previous efforts to establish a master-level student database. These were:

- Lack of support (i.e., no value was perceived by the educational sectors).
- Data privacy issues that restrict access to data.
- The differing operating environments and missions of each sector.
- The complexity of the existing data collection systems.

Since 1984, the data collection systems of each delivery system, (Pre-K-12, community colleges, and universities) have developed and become rich in substance. Each sector relies heavily on detailed student data to support internal management decisions and to drive their funding allocations. However, because the collection, management, and use of data has been designed to meet each sector's unique needs, many external constituencies find it difficult to gain access to the data for use in performing educational policy analysis.

ISF found that while some consumers of educational data, such as appropriations staff, were satisfied with their ability to obtain and use data, there were others that experienced problems and frustrations. These difficulties ranged from the consumers' inability to access raw data to frustrations in receiving information in an unuseful and untimely manner.

ISF shared these difficulties with the producers of the data to explore and validate the consumers' concerns. During this process, ISF determined that most consumers of student data experienced problems that were precipitated by one or more of the following circumstances:

- A lack of formal communication among the data producers and with the data consumers. This contributed to consumers' lack of understanding of the structure and availability of the data and to the producers' inadequate understanding of the intended use of the requested information.
- Logistical and structural complexities inherent to data management hindered data analysis.
- Difficulties in locating data or finding that data is not in the desired format or context.
- Limited access to data as a result of privacy issues and no electronic avenue to the data.

While mechanisms can be put in place that deal with some of the technical problems and access issues, ISF determined that the effects of many of the problems can be minimized through increased, regular communication between the producers and the consumers of data.

To alleviate these problems ISF recommends that:

- A method of formal communication be established among the data producers and with consumers to facilitate the exchange of information and ideas about the management and use of data. This method of communication includes a recommendation that the state hold an annual pre-legislative conference to bring together key legislative and gubernatorial analysts with the principal sector data producers. This conference will focus on the anticipated legislative data needs and on the data available within each sector.

- The educational sectors collaborate to produce and maintain an electronic information system containing Florida educational information that is accessible by the consumers of educational data (possibly including public access).

- Resources be provided to increase the analysis of student data for the consumers of the data.

Additionally, ISF developed a detailed outline of tasks and a timeline for completing the remaining activities requested in Senate Bill 1018. The duration and scope of completing these activities will be approximately six months at a cost of $130,000. However, ISF *recommends that the second segment of the study not be conducted.* ISF concluded that completing the second portion of the study will be a costly activity that will result in minimal improvement in providing better quantity and quality of data to the educational consumers; particularly, if the provisions of the recommendations contained in this report are carried forward.

ISF also recommends that in lieu of dealing with these data redundancy issues, PEPC coordinate with the data producers to develop a report for the Legislature identifying the following:

- The procedures by which the sectors review, delete, add, or modify student data.
- Any identified duplication of reporting.
- Any unnecessary collection of data.
- Any progress made toward modifying data to enhance longitudinal/intersector analysis of data.

These fully implemented recommendations will result in data consumers experiencing a lesser degree of frustration in obtaining and using data for educational policy analysis. Also, the development of an electronic information system, together with the annual data workshop, will support the easy access of data regarding Florida education, without the need for extensive and complex searches.

2.0 BACKGROUND, APPROACH, AND RELATED INITIATIVES

2.1 Background

The 1994 legislature directed the Postsecondary Education Planning Commission (PEPC) to work with the Florida Commission on Education Reform and Accountability to examine data that is currently reported by public schools, area vocational-technical centers, community colleges, and state universities. The study was to include an analysis of the feasibility of a master student-level database.

Senate Bill 1018 of 1994 stated that:

> *The Postsecondary Education Planning Commission, in conjunction with the Florida Commission on Education Reform and Accountability, shall examine data that are currently reported by public schools, area vocational-technical centers, community colleges, and state universities. The commission recommendations should serve to reduce unnecessary or duplicative data, provide a means of articulating student data across all public education institutions, and yield useful information for analysis, evaluation, and planning at the state and local levels. The commission shall convey its report and recommendations to the Legislature no later than January 31, 1995. At a minimum, the report shall include the following:*
>
> 1. *A delineation of current reported data elements that identifies the specific requirement by which such data must be reported.*
> 2. *A delineation of current reported data elements for which no known reporting requirement exists.*
> 3. *A delineation of current reported data elements that appear to be duplicative.*
> 4. *A delineation of current reported data elements that appear to conflict with one another.*
> 5. *An evaluation of the extent to which current reported data elements are meaningful for state and local analysis, evaluation, and planning purposes.*
> 6. *An evaluation of the feasibility of developing a master student-level database that incorporates all public educational institutions, including identification of the cost of developing such a database.*

7. *An identification of the short-term and long-term costs or cost savings associated with implementation of the commission's recommendations.*

Because of the magnitude of completing the entire study, the short time frame, and the resources allocated for this study, PEPC proposed a segmented approach to the study. The first phase of the study included the following:

- Identification of impediments experienced in previous attempts to establish a master student-level database.
- Identification of problems in the current use of student data for intersector policy analysis.
- Definition of one or more mechanisms to address the identified obstacles within intersector policy analysis.
- Assessment of the political and financial cost/viability of implementing such mechanisms.
- Development of a timeline and a detailed outline of tasks with related costs required for a comprehensive analysis of all student data elements as specified in Senate Bill 1018.

The second segment of the study including conducting the analysis as delineated by the findings from the first segment of the study and addressing the remaining issues requested in the legislation.

The proposed approach was accepted by legislative staff in July 1994. PEPC retained Information Systems of Florida, Inc. (ISF) in August 1994 to provide objective technical analysis of the issues to be addressed in the first segment of the study. This report represents the conclusion of the first segment of the study.

2.2 Project Approach

The approach for this project involved interviewing representatives from the organizations that currently provide data. Representatives included the MIS directors from:

- the State University System (SUS)
- the Division of Community Colleges (DCC)
- the Division of Public Schools (DPS)

and data producers from

- the Division of Applied Technology and Adult Education (DATAE)
- the Florida Education and Training Placement Information Program (FETPIP).

These individuals were surveyed about their perceptions of problems the data consumers experience, related history, and technical limitations in using data for intersector analysis.

ISF also interviewed the consumers of the data, including the following groups that are frequent consumers of educational data:

- Commissioner's Office staff, (Assistant Commissioner Stryker and Deputy Commissioner Golden)
- Senate Substantive Committee staff
- Senate Appropriations Committee staff
- House Substantive Committee staff
- House Appropriations Committee staff
- Governor's Office staff
- The Office of Program, Policy, and Government Accountability (formerly the Auditor General's Office.)
- Postsecondary Education Commission (select staff)

(A complete list of all those interviewed is attached in Appendix A of this report.)

ISF met a second time with the producers of the data to assess the validity of the consumers' complaints and solicit input for feasible solutions to the existing problems. The producers provided guidance and served as the source of functional knowledge for issues surrounding data usage and constraints.

To effectively utilize efforts of previous studies, ISF revisited the ISF 1984 report to PEPC regarding Postsecondary Education Information and the 1992 ISF Plan for the Development of a Longitudinal Database for the Division of Public Schools. Based on ISF's experience working with the state's educational databases, previous studies conducted by ISF, and information gathered from the in-depth interviews, ISF prepared an analysis which can be found in sections 3.0 and 4.0.

2.3 Related Initiatives Now Underway

There are a number of initiatives currently underway which relate to educational data and databases. These initiatives are discussed briefly to provide a frame of reference for other activities aimed at improving the functionality, quality, and usefulness of educational data and databases.

- **DCC Initiative**

  In 1993, ISF was retained by the Florida Department of Education, on behalf of the Governor's Office of Planning and Budgeting and the Legislature's staff, to perform a study. The objective of this study was to answer questions regarding the fiscal impact of concluding the development of student, personnel, and financial databases by Florida community colleges.

  Recommendations of this study led to $4.25 million in funding being provided to the Florida Information Resource Network (FIRN) to be distributed to a variety of educational consortia to assist with bringing about the complete integration of all community college databases. As a result of this study DCC and the colleges will be able to report integrated data by 1996.

- **SUS Initiative**

  The State University System is building a new retention database that will be maintained at the Northwest Regional Data Center (NWRDC). This database will hold retention information for all ten universities and will provide for shared university access to the database. This initiative should facilitate generating and distributing information on university retention.

- **Accountability**

  In 1992, the Florida Education Accountability Legislation was enacted. This legislation required performance accountability at the state agency level and institution levels. PEPC was charged with reviewing the accountability plans that were developed and submitted by state universities, community colleges, vocational-technical centers, and their corresponding state agencies. The Florida Commission on Education Reform and Accountability oversees public school accountability. Data producers and consumers report that the efforts originating from accountability activities appear to be improving the

quality of data internal to each institution, system, and the quality of data that is used across the sectors (SUS, DCC, DPS, DATAE).

- **Performance-Based Funding**

  Recent legislation created performance based-funding, a supplemental amount of money that can be awarded to institutions based on their ability to meet pre-determined performance measures (i.e., placement rates, graduation rates, successful licensure and certification) in vocational program areas.

  Data needed to prove performance measures require an improved level of data quality, tracking, and analysis. This activity further supports efforts to improve data availability for distribution to consumers.

3.0 IMPEDIMENTS TO PREVIOUS ATTEMPTS TO ESTABLISH A MASTER-LEVEL STUDENT DATABASE

According to a previous PEPC study, since the 1960's, the Florida Legislature has continually expressed interest in the availability of comparable information from the educational sectors and has made a number of attempts to elicit this type of information. In 1984, a culmination of these attempts resulted in proviso language directing PEPC to study the feasibility of creating a postsecondary education information clearinghouse. From this report, "A Study of Postsecondary Education Information," PEPC concluded that a postsecondary education information clearinghouse and master-level database were feasible and should be housed in the Office of the Commissioner of Education. The following year, the legislature appropriated funds to develop and operate the clearinghouse. The Commissioner's Office conducted a search for a clearinghouse director, but no one was ever hired to fill the position. Activity toward establishing an educational clearinghouse and developing the database waned and the clearinghouse was never fully implemented.

Through interviews and research, ISF determined that there were four predominant impediments to previous attempts to establish a master student-level database:

- Lack of support (i.e., no perceived value from the educational sectors).
- Data privacy issues that limit access to data.
- Previous efforts were politically unrealistic because of the differing operating environments/cultures of each sector.
- The (limited) complexity of the existing data collections systems at the time of the 1984 initiative.

3.1 Lack of Sector Support (i.e., No Perceived Value)

At the time of the 1984 initiative, there was little support for the design and implementation of a central database or master student-level database. Although reasons for this lack of support varied among the sectors, in general, the initiative was not supported by the administration of each sector. Sector administrators:

- Perceived the implementation, cost, and management of such a database as wasteful and inefficient.

- Felt that such a database served the external needs of the consumers far more than serving the varied and unique needs of the sectors and institutions.
- Felt that any managing staff of such a combined master-level database would be too far removed from collection and maintenance activities to be qualified to understand and effectively analyze and report the data.

The three sectors were independent, politically powerful organizations that could not support combined data collection and management. This lack of support in the educational sectors eventually led most legislative parties to also lose interest. Once the effort to find a director to head up the clearinghouse was postponed, activity toward establishing the master student-level database faded.

3.2 Data Privacy Issues

The state's universities, community colleges, and public schools collect a large amount of personally identifiable student data that is confidential. Both federal and state laws exist that limit access to this data to protect personal privacy. Specifically, the Buckley Amendment (federal) states that personally identifiable data must be protected by the custodian of the data. Further, Florida legislation protects the privacy rights of students and their families by stating that student records may not be released to anyone other than school officials without written consent.

These pieces of legislation create major impediments to establishing a master student-level database. The act of releasing student data for the creation of a master student-level database is in direct conflict with carrying out the provisions of the Buckley Amendment and operating within the confines of Florida laws. To consolidate all data into one database at the student level, the custodians of the data would be required to relinquish control of personally identifiable student data collected by their institution and could no longer ensure student/individual privacy.

3.3 Politically Unrealistic (i.e., Different Operating Environments)

Each educational sector has differing missions, goals, programs, reporting cycles, and political constituencies. Each sector delivers services to distinct populations of students and is involved in a myriad of programs, initiatives, grants, and other educational delivery activities often unique to each sector. As a result, there are differing reporting requirements and data elements that serve the political, managerial, and funding needs of each institution. While it is technically feasible to make changes in database structures (i.e., data elements and reporting cycles that would allow for the creation of a master student-level database), it is politically unrealistic. Each of the sectors stated that if a master student-level database were to be constructed there would

be a tremendous duplication of efforts. Inevitably, each sector would maintain its own version of student data to meet internal informational needs. Additionally, the sector administrations believed that data removed from the analysis and interpretation of the collecting agencies would not be reliable nor flexible enough to meet the needs of the sectors and institutions.

3.4 Complexity of the Educational Sectors' Databases

At the time of the 1984 initiative, only the State University System had a functioning, detailed data collection system in place. The Division of Public Schools was merely beginning to construct a state-level database and the Division of Community Colleges had only a state-level aggregate data collection system. The idea of a master student-level database was difficult for the educational sectors to support. The educational sectors were unable to support the master student-level database because the concept for the database was far beyond the level of development previously achieved by any one of the educational sectors. The magnitude of developing a master-student level database appeared to be an overwhelming task, given the minimum level of complexity the sectors had, at that time, achieved. The overall lack of progress toward implementing student-level databases in each sector, coupled with the lack of perceived value for a master student-level database made it more appealing for the Department of Education and the sectors to take no action on the 1984 legislation.

4.0 PROBLEMS WITH CURRENT USE OF STUDENT DATA FOR INTERSECTOR POLICY ANALYSIS AND FINDINGS

Interviews with the consumers of the data led to the identification of many frustrations and concerns with using student data for intersector policy analysis. These problems, ***as identified by the consumers*** of the data, are listed below and are followed by ISF's analysis of the problem. Note that the items listed are a compilation of concerns, many of which deal with *intrasector* issues as well intersector problems. Not all issues listed below were expressed by everyone interviewed and some consumers stated that they were content with the data they received.

4.1 Problems and Analysis

- **Timeliness of the Data**

  Consumers of educational information report that some data is untimely and may be years old when first published. Historical data is adequate for some purposes; however, it does not meet the needs of those responsible for legislative educational policy analysis. If data is needed prior to official publication, a request for a photo copy of the interim data must be made.

  Analysis

  Most data available in published reports contain information that deals with the prior academic year. Consequently, someone who needs data in February 1994, for example, would be most likely able to find only data on the prior academic year of 1992-93. This is because the current academic year of 1993-94 will not close until some time in June 1994. Depending on the type of report, some data is collected for an academic year, submitted for correction and validation, and compared to a previous academic year to track annual changes before being finally reported. By the time this process is complete, the data from the first portion of the academic year is more than a year and a half old.

  In most cases, however, report data can be provided prior to publication in a preliminary format. Unfortunately, because institutions/districts do not submit data corrections until the end-of-the-year close, this preliminary data is not 100 percent correct or accurate. As

a result, the integrity and usefulness of the data received by the consumers can be limited.

- **Timelags in Receiving Information**

  Consumers report that the time that elapses between requesting data and receiving data is too long. Depending on the request, it can be several weeks before a request is answered. Consumers reported that data is delivered to some people more quickly than others. For example, one group of consumers stated that they use the appropriations staff to make all the requests for information because the appropriations staff always seem to get a timely response.

  Analysis

  Throughout the year, the educational sectors receive requests for information from various external consumers of data. Often these requests are extremely detailed and require data to be compiled in specific ways, necessitating the creation of uncommon reports. Additionally, the person requesting the data may *or may not* have worked with the producers of the data prior to submitting the request. When the requestor has not worked extensively with the data producers prior to submitting a request for data, there is a high degree of probability there will be a need for further refinement of the request.

  Depending on these and other related factors, there is a timelag of anywhere from a few hours to several weeks for the data producers to deliver the desired information to the requestor. The nature and complexity of the request are both factors in how quickly the information can be provided. As the need for electronically stored information has increased and become more complicated, response time for specific requests has also increased.

- **Data Quality**

  Some consumers of the data question the quality of data. Consumers report that they have received data in the past that has been incorrect or reports that have been compiled incorrectly. For example, a report that may have contained correct data was compiled erroneously. Totals of a column that should have equalled 100 percent totaled less than or greater than 100 percent. This report led the reader to question the validity of the entire set of data. Another consumer was concerned about data quality; specifically, there were insufficient checks and verifications of the data as it was collected and managed. Consumers stated that even after data is corrected, individual schools report their data to

be incorrect. Incidents such as these have led some consumers to question the integrity of the data they receive from the data producers.

Analysis

The data producers are confident that there are few problems with the quality of data that resides in the educational data collection systems and report the greatest accuracy in data that is used most frequently. However, data or *compiled reports* from the educational sectors are not always flawless. Currently, when unusable or erroneous data is released, data producers report that they receive little productive feedback from consumers. As a result, data consumers become increasingly frustrated and suspicion and doubt are perpetuated rather than minimized.

- **Difficulty with Introducing Change in the Database Information**

The consumers reported that it is difficult to request changes to the data that is collected or reported. From the consumers viewpoint, the producers seem reluctant to delete or change data elements. Data elements that are no longer needed usually remain stored.

The consumers feel excluded from the process for implementing changes in the way data is collected. The consumers feel the data producers do not seek feedback on how the data could better meet external needs. The consumers would like a mechanism to introduce change that permits them to discuss their needs and obtain feedback on their requests. Today, when input is accepted, the change may take years to become active.

Analysis

To preserve the integrity of the data collection system, changes to a data collection system should be made cautiously, using good judgement. The sectors' caution and resistance to impulsive change is perceived by the consumers as reluctance to respond to consumer needs.

However, mechanisms for change do exist. Each sector has a process by which suggestions for change may be submitted. Consumers have been invited by producers to attend meetings where data changes are discussed. Unfortunately, these meetings are often out of town and focus on detailed technical information that is too intricate to benefit consumers. Consequently, current attempts to include consumers in the change process are not adequate and do not provide consumers with necessary information.

- **Difficulty in Making Ad Hoc Queries**

  Difficulty making ad hoc (non-routine) queries represents the largest number of concerns expressed by consumers. According to the consumers, ad hoc queries must be structured very carefully to ensure that the information received is what was requested. Other times, because the request is not phrased properly, the users of the data get *exactly* what they ask for and are overwhelmed by the volume of data they receive. What users ask for and what they need is often different. There is no method of refining requests unless the consumer knows who to work with in advance. Ad hoc queries require a personal telephone call to one of the MIS Directors each time non-routine data is needed.

  Some consumers expressed a desire to have access to the raw data. They felt their expertise in data analysis and their familiarity with the data element dictionaries and the data qualified them to conduct their own ad hoc queries and analysis.

Analysis

The consumers require a significant amount of information to support policy analysis and decision making. Most often, required data is specifically related to an issue that will be analyzed in the upcoming session or is needed to support pending legislation. Frequently, the material needed is information the consumer believes is available through a modification to data that already exists.

However, one of the major limitations of data management is the difficultly experienced in trying to modify data structures to answer ad hoc or one-time questions. Not all questions can be envisioned at the time the data collection system is designed and therefore, not all questions can be answered directly.

Because of the technical complexities of data storage, data collection and management, and database design, it is often impossible or very difficult to manipulate data to answer specific questions that were not anticipated prior to the creation of the data collection system. Also, it is a complex task to add or delete data to meet the transitory demands of external consumers.

Consequently, it is not uncommon for specific programming to be required to accommodate ad hoc requests. Workload and available staff further limit the sector's ability to respond. Staff at each sector are allocated to specific functions and reporting activities. When ad hoc queries are made, the MIS Director must weigh the importance

of the request against other priorities such as providing internal operating information and meeting deadlines for regular reporting. Some activity must be suspended to provide the non-routine data that has been requested.

- **Differing Data Elements/Definitions**

  Consumers reported that data elements lack a clear definition. Confusing definitions make intersector policy analysis difficult for consumers. They report that even basic questions cannot be answered easily because of multiple and differing definitions. Additionally, across the divisions, data element definitions differ. Inconsistent definitions across sectors lead consumers to draw wrong conclusions from correct data. Consumers report that more commonality of data definitions is needed across sectors.

Analysis

While there is similarity in the data definitions of the university systems and the community college system, data element definitions do differ across the sectors. The data elements "student" and "school," for example, are defined in many different ways. Therefore, when asking for specific information about students there are a myriad of ways to interpret the request. A consumer asking how many schools are in the state, might be asked, "what kind of schools?" This one word has many meanings: university, community college, vo-tech center, public school, trade school, private elementary, private university, etc. Another example is "first time in college" students. These students are defined differently by the SUS and DCC. The unwary cross-sector user of data, in this instance, would be comparing data that was not similar. These differing definitions make cross-sector analysis difficult.

These differing definitions are an inherent part of providing educational services and responding to different funding cycles and reporting requirements. However, there is little desire on behalf of the data producers to change definitions to facilitate external consumer analysis needs. If definitions are changed to meet external needs, there would be further expansion of the amount of data collected. The sectors would continue to collect currently defined data needed for their internal operations in addition to collecting any newly defined data.

- **Differing Reporting Cycles**

  Reporting cycles set by state requirements do not necessarily coincide with the cycles consumers of the data need to effectively analyze policy for legislative sessions. The most readily available data is usually the printed Fact Book data that is complied at the close of an academic year (July-June). When consumers need data, November through February, most complete data available is historical data or data from the previous academic year. The only other data available is a preliminary subset of the data that must be requested by a personal telephone call.

  Analysis

  Reporting cycles differ to meet the unique needs of each sector. While community colleges and universities have similar reporting cycles (semester), and public schools and vocational technical schools have similar reporting cycles, the actual time that current data is available for any one sector varies tremendously. Forcing reporting cycles to coincide would mean that the process of how schools and colleges are funded and how they are required by the state/federal government to report their data must also change.

- **Lengthy Correction Process**

  Consumers need timely data. Many report that the correction process for reported data takes too long. Consumers receive reports that are not final until months after an academic term ends. Consumers said that the data collection systems of each sector should employ quality checks throughout the entire collection process so that data does not need to be cleaned up and sent back to the local sites for verification. The consumers felt that once data was reported from the districts or institutions that it should be compiled and released. Consumers believe an iterative process of corrections should not be necessary.

  Analysis

  State law requires the Division of Public Schools to allow 365 days for the correction of data that has been reported to the Division. However, few schools correct data beyond a few weeks of the "official close" of data. Community colleges and universities are given three opportunities to correct data before the year-end close. Vocational schools correct data similar to both community colleges and public schools as function of operating both sectors. These lengthy (or multiple) correction periods can account for some of the differences in or "unreliable" data reported by the consumers. For example, if a consumer

receives the final fall data from a community college in March, that same data *may* be different when referenced again at the end of the academic year.

Other problems deal with the length of time it takes to report the data once a term (or reporting period) has closed. Reporting, editing, correcting, and compiling the data takes several weeks. For example, university fall terms usually end the third week of December. However, final fall data is not available until March 15, a full three months later.

Consumers' frustrations with the lengthy correction process have validity. Data producers should strive to employ quality procedures throughout the data collection process and should encourage more quality processes in data collection at the institutions prior to data submission. This may eliminate many of the checks and rechecks prior to, and after the data is submitted by the institutions. Data producers at the state level must seek ways to reduce the length of the correction process.

- **Locating the Data**

  Consumers report that for everyone except the veteran user, data is difficult to find. The consumers felt that little information is available that communicates where the data may be found. According to consumers, there is little help available in locating information other than through personal contact with the data directors themselves. Publications or directories of "where to find" or "how to use" data do not exist.

  Analysis

  In the past, some of the educational sectors have made attempts to help the legislative policy analysts understand the data and where it can be found. However, staff members change positions and roles, taking any expertise they have gained in using the data with them. Additionally, data needs, and sometimes the data itself, change. Knowing where to find new or different data is difficult without direct contact with the sector staff. Both a data element dictionary and hard copy factbooks are printed and distributed by each sector. These documents are used by many, but still require fortitude of the reader to locate needed data. Consequently for many, the need to transfer information and personal knowledge from the MIS directors to the consumers continues.

- **Difficulty Using the Data**

  Consumers reported that they know what questions they would like to have answered but do not know how to ask questions specifically enough to get appropriate answers. The

consumers are not always confident in their ability to use the data and some fear their lack of knowledge puts them at the disadvantage of not knowing whether their data query was answered objectively.

Analysis

Each educational sector publishes a data element dictionary. These dictionaries explain in detail what type of information is captured by each data element. The data is often very narrowly defined to meet the needs of the sectors and often is not readily understandable. The data, and the way it relates to other data, is a complex issue and difficult to interpret by anyone lacking detailed information on how the data is collected and managed. For example, when legislative analysts requested information on class sizes by section they were provided with an answer of approximately 20 students per section. However, the analyst was actually researching student-to-teacher ratio by class and it was not until the data provider explained that multiple sections of 20 could be taught by one instructor at the same time, (effectively raising the ratio by a significant number), did the data consumer realize their question had not elicited the intended answer.

- **Little Data Available for Intersector Analysis/Longitudinal Studies**

Many consumers have an interest in using data for longitudinal studies but the current data makes this task difficult. Inconsistent definitions, modifications, and changing definitions make longitudinal studies difficult, if not impossible. If intersector/longitudinal reports are available, consumers are unaware of them.

Data consumers expressed the same frustration with intersector use of data for policy analysis. Differing definitions, lack of common linkages across the sectors, and changing data, provide many barriers to analysts who try to make inferences about issues that cross educational sectors.

Analysis

Common data linkages/data elements between sectors are absent because data was initially collected to:

- Satisfy the unique managerial information needs of each sector.
- Meet the prescriptive state and federal reporting requirements.
- Generate data needed to support funding models.

Because a common database was never a goal for the educational sectors, the data collection systems were not designed with common linkages.

With regard to cross-sector tracking of a student, the absence of a true cross-sector common student identifier has presented a problem. The use of social security number as a cross-sector identifier for the various educational systems has not ever been fully implemented. IRS requirements of assigning a social security number for all U.S. citizens two years old or older may ease this problem as students using social security numbers as identifiers move through the school system. However, even if the IRS requires a social security number, a student cannot be required to use the number as a student identifier.

The data producers state that intersector reports exist and that some types of longitudinal analysis can be done. The fact that data consumers are unaware of these reports and availability of data relate to the need for improved communication.

- **Data Security**

  Consumers of the data are hindered by the tight restriction on data. Some consumers feel that the data producers may use federal and state laws that limit free access to data as a rationalization to restrict access to data needed for analysis. The consumers feel it is the discretion of the data producers whether to allow the release of data. Although there are forms that can be signed which allow the data producers to release the data, this action must be initiated by the data provider.

  Analysis

  Because of restrictions set by federal and state legislation, giving or gaining access to personally identifiable data is difficult. Even within the administrative offices of the sectors, access to personally identifiable data is restricted. These restrictions cause there to be a difficult barrier between easy access and exchange of information.

  Currently, data must be screened for personally identifiable data and must be filtered if personally identifiable data will be included in the report. This procedure is time consuming and requires additional labor beyond any programming required to pull the original data request.

- **Proprietary Feelings of the Data Producers**

  Relating to the issue of data security, there is the feeling that the data producers are proprietary about the data. The data producers will not allow any data to be released until they are sure for what it will be used. The consumers think the producers fear losing autonomy by providing too much data, or data in raw form. Consumers think the producers feel threatened by easy accessibility to the data and by losing the ability to scrutinize the data before it is released.

  Analysis

  Several factors are responsible for the proprietary feelings about the data. Data is often used to support or challenge educational funding issues in the legislature. This fact makes some of the data producers and sector administrators uncomfortable with a person external to the educational sector analyzing and interpreting data. The data producers feel that no one external to the management information departments are qualified to understand the complex data relationships and definitions.

  Both consumers' and producers' feelings are justifiable. However, the greatest problem here is with perceptions of both groups. Increased responsiveness of the producers and increased interaction of the two groups will help alleviate current perceptions.

- **Electronic Access to the Data**

  The consumers desire electronic (online) access to the data. Currently, electronic access is limited to electronic file transfer. Unfortunately, not all the consumers are able to take advantage of this function. The consumers do not have the ability to login to a network, access a query tool, and find the data they need. As previously mentioned, a series of requests (personal telephone calls) is the current process used to get information.

  Analysis

  Electronic access to the Florida Information Resources Network (FIRN) is technically available to every state employee. Functionally there are many offices that do not have this type of access.

  While this is a feasible activity, the sectors would be responsible for providing someone to manage this type of activity and new electronic requests would simply fall into the same queue that traditional requests fall into now.

If a graphical user interface (GUI) or "user friendly" interface was needed, it would require significantly more effort than providing the electronic transfer of a file. Designing a GUI interface would require a major programming effort and person responsible for the management of this system.

4.2 Findings

The difficulties experienced by consumers in making ad hoc queries, receiving cross sector information that delivers consistent information, and obtaining data that is static, yet current, are legitimate concerns. However, these are problems that are not easily solved and would not be solved by simply creating a master student-level database.

Instead, these issues must be resolved by the process of compromise where the producers of the data must try to accommodate the needs of the consumers without undermining the sector's own need for information. At the same time, the consumers of the data must become aware of the limitations the data producers face in providing information.

ISF found that many of the frustrations experienced by consumers were caused by a few common issues. These were:

- A lack of formal communication among the data producers and with the data consumers. This contributed to the consumers' lack of understanding of the structure and availability of the data and to the producers' inadequate understanding of the intended use of the requested information.

- Logistical and structural complexities inherent to data management hindered data analysis.

- Difficulties in locating data or finding that data is not in the desired format or context.

- Limited access to data as a result of privacy issues and no electronic avenue to the data.

Lack of Formal Communication Among the Data Producers and With Consumers

Many of the problems identified deal with perceptions that have arisen because of a lack of knowledge or available information and therefore, could be alleviated by increased communication among groups and individuals. Improved communication would provide for better understanding of the limitations of the data collection systems and would provide the consumers of the data a way to communicate their concerns directly to the producers of the data. Additionally, regular communication would provide opportunities for consumers to have advance interaction with producers for pre-planning of data requests and for giving feedback on how data or reports could be improved, and for educating consumers

Logistical/Structural Complexities

Another category of issues focuses around technical limitations in the way data is defined, collected, and combined. Users require more flexibility in querying data, greater consistency of definitions across educational sectors, coordinated reporting cycles, and shorter correction processes. Unfortunately, many of these issues are difficult to change because of the differences between educational sectors and the technical limitations in the data collection system designs.

These are problems that cannot be solved by communication. These are differences that are tied to funding or mandated by legislation or rule. The only mechanism for changing these logistical complexities is to change funding and legislation so that there is incentive for the sectors to change their reporting time frames and correction processes. Yet, changes such as these represent fundamental alterations to the educational processes of Florida and therefore, are not viable solutions to the problems. The quest for better data/information should not be a sole reason to cause changes to the structure of education. Consumers need to become more familiar with the data collection systems if they choose to work without assistance from producers. Regular communication designed to improve consumers' understanding of the data, it limitations and complexities, will help consumers manage their frustrations and better communicate their needs to the producers. However, many of these logistical problems and structural complexities are realities of data management that will continue to exist.

Difficulty Locating/Using Data

Many of the consumer complaints that involved locating and using data revolve around the issue of understanding the way in which data is categorized, collected and reported and where it is best located. While these issues cannot be fully resolved through communication, the difficulties experienced by consumers can be communicated to the producers of the data and then the producers can seek additional means for minimizing the problems. Additionally, if more functional

mechanisms for locating data are established consumers can access more data themselves. Electronic access to directories of data and reports will require that consumer learn to manipulate an electronic application, but once this step is accomplished, consumers will have an easier time locating and using data for intersector analysis.

There is a further need for increased analysis of data. The data collected by the sectors is complex. Realistically, only those intricately involved with the collection and management of the data are experienced enough to analyze it. If the sectors could provide a more quality analysis of existing data to consumers, their desires to change and access data would decrease. For the most part, consumers want information that makes their job of policy analysis easier. If meaningful reports are provided in a timely fashion, a majority of the consumer frustrations with current situations would disappear.

Access to Data

As mentioned above, electronic access is a functionality desired by consumers. Currently very few offices can take advantage of electronic access. Even if they could, there is little data available for transfer. If the consumers could be provided with some means to access data on a routine basis to research and query prepared reports, many people would feel less frustration with the limited access to data. Additionally, the sectors should strive to make more intersector data available to the consumers. If more information were accessible consumer frustrations could be minimized.

In the next section of this report ISF has proposed three recommendations to address these problems and facilitate the use of student data for intersector policy analysis.

5.0 RECOMMENDATIONS

Data consumers experience a variety of problems when trying to use data provided by the educational sectors for policy analysis. These problems result from a combination of many factors including:

- Complicated data collection systems.
- The need for complex analysis of data.
- Differing operational environments for each of the educational sectors.
- General lack of understanding/data sophistication on the part of the consumers.
- Restrictive legislation.
- Poor access to data.
- A lack of interest (or ability) on the part of the data producers to be more responsive to the external needs for information.

Additionally, **the overall lack of communication, among the data producers and with the consumers, serves to perpetuate the problems** and is driving consumers to attempt to legislate compliance for providing understandable, meaningful information.

5.1 Formal Communication

It is recommended that a method of formal communication be established among the data producers and with consumers to facilitate the exchange of information and ideas about the management and use of data.

In every interview conducted, the desire for a better understanding of the data was expressed. Additionally, each group interviewed expressed a desire for less ad hoc and more structured, scheduled interaction with the data producers. The consumers wanted a mechanism to provide input and give feedback to the data producers in hopes of achieving better understanding among all groups.

An increased level of communication among producers and between consumers is needed. Three methods of interaction are recommended. The first method of communication is to have the MIS directors from each of the educational sectors come together in regularly scheduled meetings to discuss intersector data issues and plan for improved responses to data consumers.

The second method of communication should be regular information workshops for the consumers of the data. The third method of formal communication should include pre-legislative conferences to provide a forum for planning and feedback. At these conferences, consumers could receive feedback about specific requests they have made and producers can receive information about how data has been provided and how it can be improved to meet the consumer needs.

- **Data Coordination Group**
  It is recommended that the MIS directors and selected staff from each of the sectors meet regularly within each year to:

  - Coordinate data-related issues across the sectors.
  - Develop the agendas for the data workshops and pre-legislative conferences. (Discussed later in this section.)
  - Develop an annual plan to facilitate providing intersector and longitudinal information to data consumers.
  - Address consumer concerns identified in data workshops or pre-legislative conferences.
  - Oversee the development of an electronic information system which provides access to current reports and data.
  - Respond to continually evolving requests for modifications to information delivery.

Meetings of the Data Coordination Group (DCG) should be facilitated by a person external to the educational sectors (see section 5.3).

- **Data Workshops**
  Data workshops for the consumers should incorporate predetermined levels of information about the data collected and how it is structured. Workshops may be structured to explain the data, beginning at its origin, to get all the consumers on the same level of data sophistication. The term "data sophistication" is used to measure an individual's level of understanding about the data they are using.

  Agencies and offices that use educational data could determine whether all those that deal with data should attend or if a few select individuals will become the data experts for the agency. Although two annual workshops are recommended, the frequency of the workshops would depend on the level of data sophistication required. Most of the

information that would be necessary to communicate would pertain to structuring requests for information. Learning how to structure requests to receive exactly the information needed should be a goal of all consumers.

Data workshops should be designed by surveying the consumers to determine what level of data sophistication they require to effectively do their jobs. Consumers' wants may be different than consumers' needs. An individual may want to become extremely sophisticated about the data, but their needs may not require the same level of sophistication.

Additionally, these sessions can be used to communicate the complexities of the data that often leave the data consumers feeling unsatisfied. Knowing exactly what data to request and how to ask for it would be a direct result of increased data sophistication. If the consumers become more familiar with the data, the limitations, and the data producers, making ad hoc queries will be more easily facilitated. Increased communication will help the consumers phrase the data requests and will assist producers in delivering more meaningful reports and anticipating upcoming data needs.

It is recommended that the two data workshops be held each year for the purpose of enhancing communications between consumers and producers.

- **Pre-Legislative Conferences**

  Formalized feedback processes and planning sessions should be designed. The designers and facilitator of these conferences should be located within the groups of producers or located with an entity external to the educational sectors. The ownership of the meetings and communication lines are discussed in the explanation of the Data Coordination Group above.

  Primary functions of the conference would be to communicate any changes in the collection or reporting of data and to identify specific data and reports that will be needed to support the major issues that will be addressed in the upcoming legislative session. If one conference is not sufficient, the option should remain open for hosting a post-legislative conference. This would facilitate requesting data that is needed as a result of actions taken during the legislative session, as well as requesting data needed for upcoming sessions.

Feedback processes should be part of the conference to allow the consumers to communicate with the producers about specific data needs and the effectiveness of current data processes. The purpose of a formal feedback process would be to facilitate continuous quality improvement of the data that is provided. Quality improvement may occur on both sides of the data. The producers may be able to improve their methods of providing data, and the consumers may be able to restructure the way they request data. As a part of the feedback process, the consumers may learn more about some of the problems producers have in providing certain data and the producers may be able to ease many of the challenges facing the consumers. Understanding each other's problems will lead to more efficient processing.

It is recommended that the pre-legislative conference occur in a series of meetings held over two days. The responsibility and funding for hosting these conferences should rotate annually among each of the sectors.

5.2 Electronic Access to Reports/Data and File Transfer

It is recommended that the educational sectors collaborate to produce and maintain an electronic information system that is accessible by the consumers of educational data.

As the consumers of data are becoming more comfortable with technology, many of them desire to have electronic access to data. The complexity of their requests range from being provided with an online directory of available reports and information to being provided with online access to raw data stored at the NWRDC. Demand for decision support systems is forcing the data producers to move beyond merely retrieving data to providing and converting data into useful information. ISF recommends the following electronic systems be developed to meet consumer needs.

- **Online Directory**

  An online directory of data elements and reports would facilitate determining where data is located and what reports currently exist. The directory should be made available on FIRN as part of a larger electronic information system (discussed later in this section). Easy access to an online directory is a key factor in the level of its use. The online directory should include lists of reports that are available, the type of data conveyed in the report, and lists of data elements that are collected. A search function could expedite the process of locating report titles or data element names. The specific user interfaces, or

appearance of the screen, in which the directory would appear will depend on the computer the consumer is using.

The main advantages of an online directory includes:

- Ease of locating reports and/or data element definitions.
- Timely updates of new or current reports are available.
- Facilitates learning about other reports and compiled information.

- **File Transfers**

  Electronic file transfer would expedite information exchanges between data producers and data consumers. Some transfer of files on floppy disks is currently occurring; however, electronic transfer of files over phone lines or networks is not readily available. The provision of electronic file transfer would allow for a more timely response to data requested by the consumers.

  If access to FIRN was available in every office, then electronic access to data could be provided. Issues such as what type of data and the degree to which the data is processed or compiled in reports could be issues that would have to be resolved prior to providing such access. In its simplest form, electronic access could be used to make electronic versions of reports available to consumers who could then import files for use in local applications and analysis. Much of what is currently provided in the printed fact books could be sent via an electronic file to a consumer.

  Electronic transfer of files will require oversight and maintenance. The actual method of sending and receiving files electronically would depend on the technology available within the different educational sectors. Files could be sent via an electronic mail application, placed in a specific directory on a network for downloading purposes, or transmitted and received using a variety of electronic file transfer methods. The expectation that accompanies these types of services is that the data producers will be responsible for ensuring the data quality and properly transferring a file. The consumers must be responsible for gaining the expertise needed to use the data. This implies that data consumers must understand the complexities of relational databases, flat files, data definitions, and data storage/retrieval.

- **Electronic Decision Support System**

  During the focus group session with the producers of the data, it was discovered that three of the five agencies that produce data were either in the process of pursuing or were considering the development of an electronic system that will communicate management education data to select groups of consumers. This discovery reinforced the value of increased communication among the data producers and set the stage for a collaborative effort among the data producers to develop a state-wide electronic education information system.

  With some effort, a data warehouse could be established to house a number of co-developed reports that consumers anticipate needing on a regular basis. Query capabilities on select sets of data or reports would provide the consumers with some access to the required data. The data made available to consumers would have to comply with privacy laws and should be provided in varying levels. For instance, if an individual wanted a high-level view of data, they should be able to browse a high-level summary report. If an individual wanted to query on the data behind the summary report, some form of originating data should be made available. The data behind the summary reports must be provided with caveats just as caveats are currently provided with hard copy data.

  In addition to meeting consumer needs for information, the electronic decision support system can be designed to allow public access to information such as educational statistics.

- **Electronic Factbook**

  Factbook information should be provided electronically and should have specific functionalities. Search functions could be used to locate data presented electronically. Cut and paste functions could be used to retrieve portions of data from the factbook for general use. If consumers still wished to reference a printed copy, they could print a version or portions of a version at their discretion. An electronic factbook could be updated more easily and provided as completed information is made available.

  These online systems (online directory, file transfer, decision support system, electronic factbook) should be accompanied by a help line for the initial implementation period. The length of time the help line should stay active would depend on the number of calls incurred. The goal of an online system is to enhance the sophistication of the consumers

and reduce the number of requests for information that already exists. The data element portion of the online system would facilitate the consumers' understanding of the data and should expedite the ad hoc querying process by providing consumers information about the data and the information being requested.

An approach to implementing the electronic factbook is to develop a world-wide web (WWW) and gopher Internet system to maintain and deliver the data. The information would be readily accessible to anyone with Internet access. With this approach, Florida educational statistics and published reports could be indexed and made readily available once they were connected to a hypertext format (HTML) for use on the Internet.

5.3 Resources for Analysis

It is recommended that resources be provided to ensure that increased analysis of data is provided to the consumers of the data and that increased intersector and longitudinal analysis is conducted.

Two of the more controversial points among those interviewed for this study were the need for additional, meaningful data analysis and the best method for providing this service. Possibilities considered included:

- Creating a master student-level database
- Establishing a data clearinghouse external to the three sectors
- Transferring the analysis responsibility to an existing agency currently providing related decision support information.
- Creating a staff of cross-sector analysts to address the information gaps in student data.

From the options considered, three alternatives were selected as feasible means of providing more meaningful analysis. Each should be evaluated by PEPC and one recommended to the legislature. Each option with its advantages and disadvantages are listed below. The three alternatives were:

- Empower a coordinating entity to oversee the periodic gathering of the data producers. These meetings would help ensure that MIS directors meet to examine issues related to improving the quality of information provided to the external constituencies and to improving the availability of intersector information.

- Provide resources to each of the educational sectors to provide additional staff specifically assigned to facilitate consumer requests and to implement planning to provide intersector and longitudinal studies and reports.

- Provide resources to an entity external to the educational sectors to provide staff specifically assigned to facilitate consumer requests and provide analysis of current data for intersector and longitudinal issues and make recommendations to the sectors on modifications needed to facilitate this type of analysis.

Coordination Entity

Resources should be provided to an external agency such as PEPC, the Commissioner of Education's office, FETPIP, FIRN, the Knott Data Center, the Joint Legislative Management Committee, or the Office of Postsecondary Education Coordination for the purposes of coordinating both the quarterly meetings of the Data Coordination Group and the effort to design and develop the electronic information system.

Additionally, this coordinating entity could assist with the planning and delivery of the data workshops and the pre-legislative conferences.

Advantages:

- Provides a planner external to the educational sectors responsible for bringing together the data producers.
- Ensures that data workshops, pre-legislative conferences, and data coordination group meetings occur.
- Provides a person charged with initiating the implementation of the electronic information system.

Disadvantages:

- Housing this function in an external agency may overload the current staffing capabilities of the organization.
- Housing this resource outside the educational sectors provides for a more administrative/clerical role rather than a technical role. A technical role would still be needed by the sectors to perform the electronic system maintenance or electronic file transfer.

Provide Resources for Internal Analysis

To provide many required services, the data producers need additional staff skilled to assist with the data analysis workload. These staff could be targeted to respond to consumer needs and work internally to improve the availability of intersector and longitudinal data.

Advantages:

- Provides the additional resources needed to perform analysis and respond to ad hoc queries.
- Provides resources to maintain the electronic information system and perform file transfer.
- Provides resources to plan and conduct the data workshops and pre-legislative conferences.

Disadvantages:

- There is minimal support from the legislature for increasing staff in the educational sectors.
- This option does not ensure coordinated efforts among the data producers or that intersector/longitudinal issues will be resolved.
- Does not guarantee that resources will be used by the educational sectors as envisioned.

Provide Resources for External Analysis Entity

An educational clearinghouse could be established to serve as a point of distribution for routine data and public information. This clearinghouse could be staffed by analysts with a high degree of expertise who would conduct ad hoc analysis and intersector/longitudinal type studies as needed. This option would leave the collection, management, and storage of data as responsibilities of each sector, but would move the analysis and research components to a neutral body. The sectors could then concentrate on meeting the routine federal and state reporting requirements.

Advantages:

- Provides for objective analysis of data and a focused mission for:
  - Improving responses to data queries.
  - Providing intersector/longitudinal analysis.
- Provides staff to assist in the development and maintenance of the electronic information system, data workshops, and pre-legislative conferences.

Disadvantages:

- A difficult balance of authority and cooperation would be required between the sectors and the clearinghouse.
- Staff put in the position of being external to the educational sectors, yet charged with analyzing and reporting data, will face many of the same problems experienced by the consumers: access, lack of data sophistication, lack of consumer interaction in planning data requests.
- There is strong opposition to this alternative from the educational sectors and it is unlikely that this effort will be successful without prescriptive legislation that provides access to the data. The educational sectors feel that staff of an entity external to the educational sectors would be too far removed from collection and maintenance activities effectively analyze and report the data.
- External analysts will be required to have or develop an *extremely* detailed understanding of the three educational sectors, they way the data is housed and collected, and the complex relationships between data elements. Currently, this knowledge is distributed across many staff in the sectors' MIS departments.
- Duplication of function will occur because the data producers will run parallel/comparable analysis to ensure that data has been compiled and reported correctly.
- Many consumers fear this option will create another level of bureaucracy that consumers will have to go through to get information.
- There is minimal support from the legislature for increasing staff for the purpose of educational analysis.

6.0 POLITICAL AND FINANCIAL COST/VIABILITY OF IMPLEMENTING THE IDENTIFIED MECHANISMS

6.1 Formal Communication

Annually, a specific appropriation should be made to one of the sectors to provide the two data workshops and to provide the two-day, pre-legislative conference. The responsibility and funding for hosting these activities should rotate between the sectors so that each of the sectors will be responsible for providing the events only once every three or four years.

Funds are needed to cover the expense of hosting the conference and meetings. Printing, staff time, and promotion of these events must be budgeted.

Cost: $5,000 (Printing and promotions of the workshops and conferences: $1,000 per workshop (estimated two) and $3,000 per conference. Conference activities should be held in the Florida Education Center.)

Political Viability During the research conducted for this study both consumers and producers exhibited a sincere interest in improving communication among the data producers and with the consumers.

Because of the small cost and shared interest, this recommendation is feasible. It should be noted however, that both consumers and producers may be more supportive of this idea in concept than in practice.

6.2 Electronic Access to the Data

ISF has established that at least three of the five data producers are pursuing or are interested in pursuing, an electronic information system. To ensure that these systems are not developed separately and inconsistently, funds should be provided for the collaborative planning, design, and implementation of an electronic information system. ISF estimates that such a system could be developed over 12 months.

Cost: $200,000 A cost of $200,000 is required for an outsource contractor or full-time personnel to be provided to the sectors for the period of time required to develop the system.

Political Viability This effort is supported by all sectors that produce and use educational data. It should be noted that the effort will not be supported if the system is designed to access raw data. This effort will be supported by the educational sectors as long as the access to electronic information is limited to non-personally identifiable reports and published documents. The SUS does not, at this time, support any concept which promotes independent external analysis of SUS data.

6.3 Provide Resources to Ensure Additional Analysis

Option 1 Coordination Entity

Funds should be provided to an agency such as PEPC to provide part-time support for coordinating the meetings and workshops needed to promote formal communication. Additionally, this part-time support would be charged with initiating the development of the electronic information system.

Funds for this resource should be allocated annually as either OPS funds or as a permanent half-time position. The nature of this role would require para-professional to professional-level skills.

Cost: $30,000

Political Viability While PEPC is the most logical place to house this function, there is a historical emphasis from the Commission that PEPC remain a non-operational entity. Assigning this coordinating function to PEPC moves the Commission closer to an operational role.

Option 2 Resources for Internal Analysis

If resources for internal analysis are provided, it is recommended that each of the four educational sectors be provided with one highly skilled analyst. This individual would

assume the responsibilities for providing improved response to data queries and would work internally to develop intersector and longitudinal studies for use by the consumers.

Cost: $200,000 The total cost is approximately $200,000 to provide one professional researcher/analyst (@$ 50,000 each) to the SUS, DCC, DPS, and DATAE.

Political Viability The legislature will be reluctant to provide additional positions to the Department of Education. There are concerns that even if positions are provided, they will be absorbed by the sectors into other capacities than those intended in this report.

The sectors are concerned that the additional responsibility for analysis and coordination will be enforced without the additional resources needed to provide the increased services.

Option 3 Resources for External Analysis

The costs of establishing an external analysis entity are higher because the additional personnel needed for support roles. There is a need to have one of the analysts fulfill a managerial role and be responsible for management and supervision of the entity's efforts. Additionally, there is a need for three analyst, each who specializes in one of the three major sectors (SUS, DCC, DPS), and four supporting staff to conduct technical activities and research. Finally, there are overhead cost associated with establishing a separate entity.

Cost: $460,000

1 staff x	$70,000	=	$ 70,000
3 staff x	$60,000	=	$180,000
4 staff x	$40,000	=	$160,000
			$410,000
Administrative costs			**$ 50,000**
Total			**$460,000**

Political Viability There are a number of concerns regarding the establishment of an external entity that would provide analysis of educational data. The

high cost of establishing such a unit is a deterrent and there is little legislative support for this type of expenditure. Additionally, this option will create redundancy and duplication in data analysis because the educational sectors will continue to conduct analysis to substantiate any analysis that occurs external to the sector. Finally, there is the issue of added value. Can an entity that is removed from the collection, management, storage, and maintenance of the data add value to the current processes? An external analysis entity will be challenged with overcoming many obstacles.

7.0 TIMELINE AND DETAILED OUTLINE OF TASKS (WITH COSTS) FOR COMPLETING A COMPREHENSIVE ANALYSIS OF ALL STUDENTS DATA ELEMENTS AS SPECIFIED IN SENATE BILL 1018.

ISF has developed a timeline and detailed outline for completing the activities in the second segment of this study. The second segment, as specified in Senate Bill 1018, includes a comprehensive analysis of all student data elements. **ISF estimates that the duration and scope of completing the second portion of the PEPC study as delineated in Senate Bill 1018 will be a project of six months duration and a scope of approximately $130,000.** A detailed outline of the tasks and costs required for the comprehensive analysis of all student data elements as specified in Senate Bill 1018 is included in *Appendix B.*

As envisioned, the second segment of the study required PEPC to conduct a comprehensive analysis of the data elements and reporting requirements of the educational sectors to reduce unnecessary or duplicated data and to increase the articulation of student data across all public education institutions. As reported in this study, current problems with providing data for analysis, evaluation, and planning concentrate in the areas of poor communication, differing operational environments, and data privacy issues. Issues such as collecting too much/unnecessary data, or the need to collect additional data to provide more in-depth information about intersector concerns, were discussed but never identified as existing impediments to providing more comprehensive educational data.

Based on the information collected in preparation for this study, ISF has concluded that completing the second phase of the study will be a costly endeavor that will provide for only moderate improvement in each sector's ability to provide useful information for analysis, evaluation, and planning at the state and local levels. Each educational sector currently conducts an annual review of the data collected and makes adjustments to the data as needed. These annual reviews currently meet the needs for eliminating duplicitous reporting requirements and adding data to provide useful information. Additionally, the activities for the Data Coordination Group (as detailed in section 5.1) will

eliminate many of the problems that currently exist with using student data for policy analysis.

To ensure that the Data Coordination Group retains its focus on enhancing student data to provide useful information for analysis, evaluation, and planning at the state and local levels, the Data Coordination Group should be required to submit a single report to PEPC by January of 1997 that details the following:

1) The procedures by which the sectors review, delete, add, or modify student data.
2) Any identified duplication of reporting.
3) Any unnecessary collection of data.
4) Any progress made toward modifying data to enhance longitudinal/intersector analysis of data.

Given the level of increased communication, access to data, and the focused efforts of the data producers to improve information provide to the consumers, the need for a comprehensive analysis is unnecessary.

If the recommendations of this report are followed, the results will be improved information delivery and improved effectiveness of data collection and analysis.

Appendix A

The following represents a comprehensive list of people that were interviewed individually, contributed during the group workshops, or provided feedback on the workshop summaries.

Commissioner's Office
Cecil Golden
Laurey Stryker

Senate Substantive Staff
Mike O'Farrell
Narayan Persaud

Senate Appropriations Staff
Dale Hickam
Linda Collins

House Substantive Staff
Ann Levy
Bob Cox
Cynthia Burt
Scott Jenkins
Sheila Hill
Teresa Klebacha
Terry Olsen

House Appropriations Staff
Dave Lycan
Jackie Maxey
Nancy McKee

Governor's Office Staff
Carolyn Broadbent
Chuck Sanders
Debbie Gallay
Pam Bunkley
Sharon Wynn
Tonja Lemon

Office of Program, Policy, and Government Accountability (OPPAGA)
Claude Hendon
Jane Fletcher

PEPC Staff
Cherly Blanco
David Wright
John Opper

Division of Public Schools
Lavan Dukes

Division of Community Colleges
Connie Graunke
Howard Campbell

State University System
Shirley Roddenberry

Division of Applied Technology and Adult Education (DATAE)
Rod Nedeau

Florida Education and Training Placement Information Program (FETPIP)
Jay Pfeiffer

PEPC Database Analysis

ID	Task Name	Type	Start Date	End Date	Estimate Hours	Cost	Resource Assignments	Hours
1.0	PROJECT MANAGEMENT	Phase						
1.00	Start Project	Milestone		8/1/95				
1.01	Conclude Contractual Requirements	Activity						
1.01.01	allocation	Task	8/2/95	8/2/95	12	1,400	Consultant/Project Director	4
							Consultant-Senior	8
							PEPC Staff	0
1.02	Define Detail Project Schedule and Deliverables	Activity						
1.02.01	allocation	Task	8/3/95	8/8/95	16	1,600	Consultant-Senior	16
							PEPC Staff	0
1.10	Start Project Activities	Milestone		8/8/95				
1.11	Project Management	Activity						
1.11.01	allocation	Task	8/9/95	9/5/95	80	17,800	Consultant/Project Director	16
							Consultant-Senior	24
							Consultant	40
							PEPC Staff	0
							Project Expenses	
	Conclude Project Activities	Milestone		1/10/96				
1.12	Project Assessment	Activity						
1.12.01	allocation	Task	1/11/96	1/17/96	28	1,400	Quality assurance	16
							Consultant/Project Director	4
							Consultant-Senior	8
							PEPC Staff	0
1.99	Conclude project	Milestone		1/17/96				
2.0	DATA ANALYSIS	Phase						
2.00	Start data Analysis	Milestone		8/8/95				
2.01	Review Prior Studies	Activity						

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PEPC Database Analysis

ID	Task Name	Type	Start Date	End Date	Estimate Hours	Cost	Resource Assignments	Hours
	allocation	Task	8/9/95	8/9/95	32	3,200	Consultant/Project Director	8
							Consultant-Senior	8
							Consultant	16
							PEPC Staff	0
2.02	Identify All Data Now Collected	Activity						
2.02.01	public school data identification	Task	8/10/95	8/15/95	32	2,800	Consultant-Senior	16
							Consultant	16
2.02.02	vocational data identification	Task	8/10/95	8/14/95	52	4,300	Consultant-Senior	16
							Consultant	36
2.02.03	community college data identification	Task	8/15/95	8/17/95	48	4,000	Consultant-Senior	16
							Consultant	32
2.02.04	university data identification	Task	8/15/95	8/21/95	48	4,000	Consultant-Senior	16
							Consultant	32
2.02.05	assemble a student EntityRelationshipModel	Task	8/22/95	8/28/95	96	7,600	Consultant-Senior	16
							Consultant	80
2.02.06	pepare summary of what is collected	Task	8/29/95	9/4/95	100	8,500	Consultant-Senior	40
							Consultant	60
2.02.07	validate findings	Task	9/5/95	10/2/95	72	7,000	Consultant/Project Director	8
							Consultant-Senior	40
							Consultant	24
							PEPC Staff	0
							AEIC Committee	0
2.99	Finish Data Analysis	Milestone		10/2/95				
3.0	ASSESSMENT OF DATA USAGE	Phase						
3.00	Start Data Usage Analysis	Milestone		10/2/95				
3.01	Identify Data Reporting Requirements	Activity						
3.01.01	allocation	Task	10/3/95	10/10/95	48	4,200	Consultant-Senior	24
							Consultant	24
3.02	Identify Duplicative Reporting Requirement	Activity						
3.02.01	allocation	Task	10/9/95	10/12/95	32	2,400	Consultant	32

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PEPC Database Analysis

ID	Task Name	Type	Start Date	End Date	Estimate Hours	Cost	Resource Assignments	Hours
3.03	Identify Conflicting Data Reporting Requirements	Activity						
3.03.01	allocation	Task	10/11/95	10/13/95	24	1,800	Consultant	24
3.04	Assess the Relevance of Current Data	Activity						
3.04.01	Interview users of Florida student data	Task	10/3/95	10/6/95	108	10,500	Consultant	60
							Consultant/Project Director	24
							Consultant-Senior	24
							Governor Staff	0
							Legislative Staff	0
							BOR Staff	0
							DOE Staff	0
							DCC Staff	0
3.05	Consolidate Data Usage Analysis	Activity						
3.05.01	allocation	Task	10/16/95	10/18/95	64	5,400	Consultant-Senior	24
							Consultant	40
3.06	Validate Data Usage Analysis	Activity						
3.06.01	allocation	Task	10/19/95	11/15/95	48	4,600	Consultant/Project Director	8
							Consultant-Senior	16
							Consultant	24
							PEPC Staff	0
							AEIC Committee	0
3.99	Finish Data Usage Analysis	Milestone		11/15/95				
4.0	FEASIBILITY ANALYSIS OF MASTER STUDENT I	Phase						
	Task completed as a result of 1994 study							
4.00	Start Feasibility Analysis of Master Student D	Milestone		11/15/95				
4.99	Finish Analysis of Master Student Database	Milestone		11/15/95				
5.0	RECOMEMENDATIONS DEVELOPMENT	Phase						
5.00	Start Development of Recommendations	Milestone		11/15/95				
5.01	Develop Report Structure	Activity						
5.01.01	allocation	Task	11/16/95	11/16/95	16	1,600	Consultant/Project Director	4

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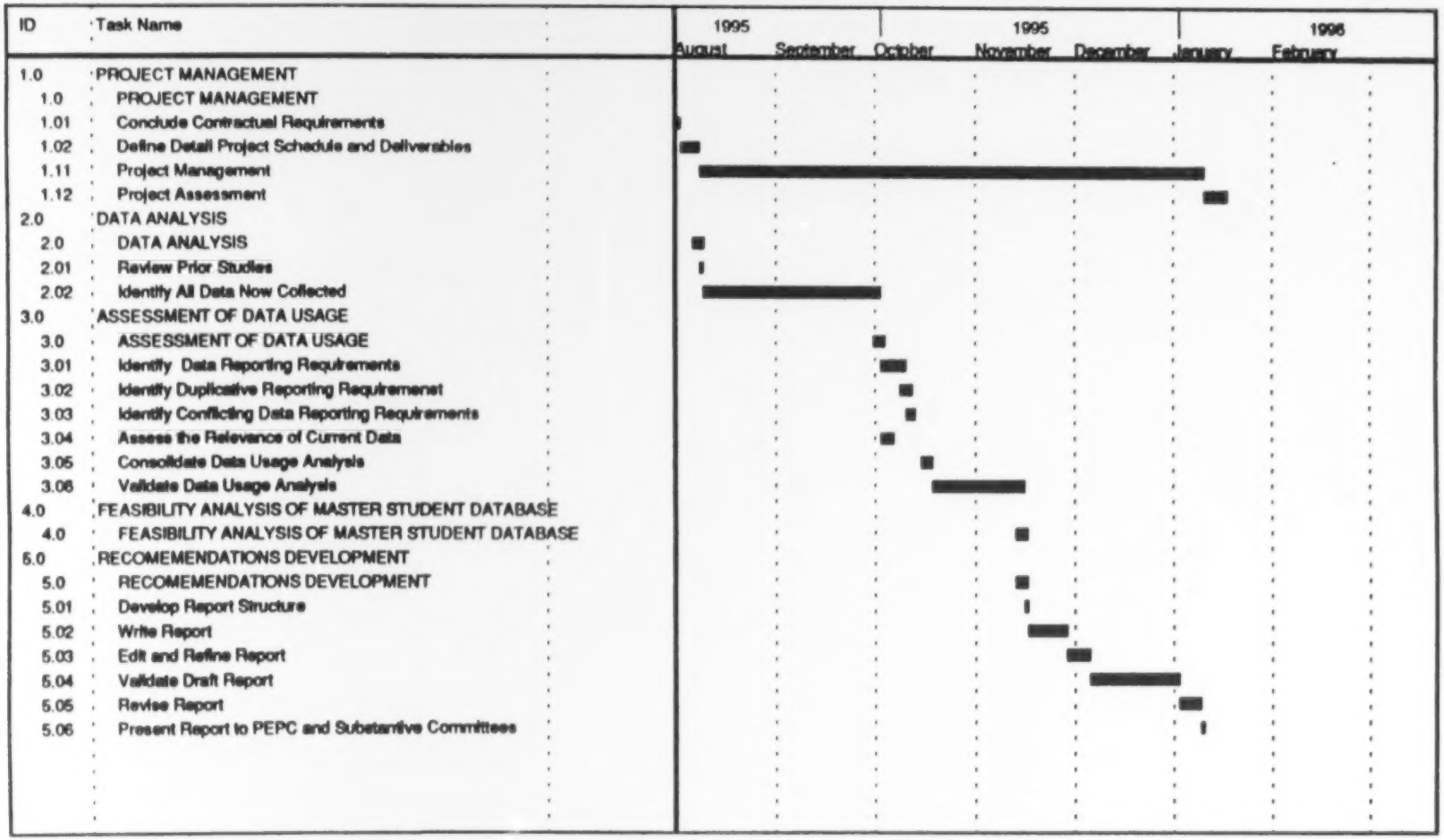
ID	Task Name	Type	Start Date	End Date	Estimate Hours	Cost	Resource Assignments	Hours
							Consultant-Senior	4
							Consultant	8
							PEPC Staff	0
							AEIC Committee	0
5.02	Write Report	Activity						
5.02.01	allocation	Task	11/17/95	11/28/95	180	15,000	Consultant-Senior	60
							Consultant	120
5.03	Edit and Refine Report	Activity						
5.03.01	allocation	Task	11/29/95	12/5/95	80	7,600	Consultant/Project Director	8
							Consultant-Senior	40
							Consultant	32
5.04	Validate Draft Report	Activity						
5.04.01	allocation	Task	12/6/95	1/2/96	8	800	Consultant-Senior	8
							PEPC Staff	0
							AEIC Committee	0
5.05	Revise Report	Activity						
5.05.01	allocation	Task	1/3/96	1/9/96	104	9,100	Consultant/Project Director	4
							Consultant-Senior	40
							Consultant	60
5.06	Present Report to PEPC and Subetantive Comm	Activity						
5.06.01	allocation	Task	1/10/96	1/10/96	20	2,000	Consultant/Project Director	4
							Consultant-Senior	8
							Consultant	8
5.99	Finish development of Recommendations	Milestone		1/10/96				
Totals					1,348	126,600		1,348

11/10/94	Gantt Chart	Page 1
	PEPC Database Analysis	



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PEPC Database Analysis

ID	Task Name	1995 August	September	October	1995 November	December	1996 January	February
	Consultant/Project Director	28.0	8.0	32.0	8.0	4.0	12.0	
	Consultant-Senior	156.0	58.0	83.0	87.0	32.0	56.0	
	Consultant	272.0	63.0	194.0	153.0	18.0	68.0	
	Quality assurance						16.0	
	PEPC Staff	0.0	0.0	0.0	0.0	0.0	0.0	
	AEIC Committee		0.0	0.0	0.0	0.0	0.0	
	Governor Staff			0.0				
	Legislative Staff			0.0				
	BOR Staff			0.0				
	DOE Staff			0.0				
	DCC Staff			0.0				
	Project Expenses	0.0	0.0					

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Appendix B

STATUTORY AUTHORITY CONCERNING EDUCATION INFORMATION

Through proviso language of the 1989 General Appropriations Act, the Florida Legislature created the Automated Education Information Commission (AEIC) with representation from each education sector to ensure statewide coordination of all automated educational computerized systems and networking. The AEIC has been reauthorized annually with the following proviso language:

> a commission shall be formed to ensure statewide coordination of all automated educational computerized systems and networking. The commission shall be composed of the Commissioner of Education, the Secretary of State, the Chancellor of the State University System, the Executive Director of the State Community College System and the Executive Administrator of the Information Resource Commission. Educational automation plans, annual budgets and legislative requests of the Department of Education, the State University System, the Community College System, and the Division of Library and Information Services of the Department of State shall be submitted to and reviewed by the commission to ensure networking and automation compatibility.

In its annual report to the Joint Legislative Information Technology Resources Committee, the AEIC includes a statutory framework for automated education information systems and a statement of principles for ensuring coordination and networking. Current statutes provide authority for the Commissioner of Education to be responsible for centralized oversight of data relative to long-range planning from all public education sectors for the development of a unified system of public education.

Statutory Framework

229.512 Commissioner of Education, general powers and duties.--The Commissioner of Education is the chief educational officer of the state, and he has the following general powers and duties:

(7) To assemble all data relative to the preparation of the long-range plan for the development of the state system of public education.

229.551 Educational management.--

(1) The department is directed to identify all functions which under the provisions of this act contribute to, or comprise a part of, the state system of educational accountability and to establish within the department the necessary organizational structure, policies, and procedures for effectively coordinating such functions. Such policies and procedures shall clearly fix and delineate responsibilities for various aspects of the system and for overall coordination of the total system. The commissioner shall perform the following duties and functions:

(b) Coordination of management information system development for all levels of education and for all divisions of the department, to include the development and utilization of cooperative education computing networks for the state system of public education;

(c) Development of data base definitions and all other items necessary for full implementation of a comprehensive management information system as required by s. 229.555;

(f) Development and coordination of a common course designation and numbering system for community colleges and the State University System which will improve program planning, increase communication among community colleges and universities, and facilitate the transfer of students....Also, the system shall be applied to all postsecondary and postsecondary adult vocational programs and courses offered in school districts and community colleges; and

(g) Development of common definitions necessary for managing a uniform coordinated system of vocational education for all levels of the state system of public education.

229.555 Educational planning and information systems.--

(1) EDUCATIONAL PLANNING.--

(a) The commissioner shall be responsible for all planning functions for the department, including collection, analysis, and interpretation of all data, information, test results, evaluations, and other indicators that are used to formulate policy, identify areas of concern and need, and serve as the basis for short-range and long-range planning. Such planning shall include assembling data, conducting appropriate studies and surveys, and sponsoring research and development activities designed to provide information about educational needs and the effect of alternative educational practices.

(2) COMPREHENSIVE MANAGEMENT INFORMATION SYSTEMS.--The commissioner shall develop and implement an integrated information system for educational management. The system shall support, as feasible, the management decisions to be made in each division of the department and at the individual school and district levels. Similar data elements among divisions and levels shall be compatible. The system shall be based on an overall conceptual design; the information needed for such decisions, including fiscal, student, program, personnel, facility, community, evaluation, and other relevant data; and the relationship between cost and effectiveness. The system shall be managed and administered by the commissioner and shall include a district subsystem component to be administered at the district level, with input from the reports-and-forms control management committees. Each district school system with an unique management information system shall assure that compatibility exists between its unique system and the district component of the state system to the extent that all data required as input to the state system shall be made available in the appropriate input format.

229.8075 Florida Education and Training Placement Information Program.--

(1) The Department of Education shall develop and maintain a continuing program of information management named the "Florida Education and Training Placement Information Program," the purpose of which is to compile, maintain, and disseminate information concerning the educational histories, placement and employment, enlistments in the United States armed services, and other measures of success of former participants in state educational and training programs.

(2) Any project conducted by the Department of Education that requires placement information shall use information provided through the Florida Education and Training Placement Information Program, and shall not initiate automated matching of records in duplication of methods already in place in the Florida Education and Training Placement

Information Program. The department shall implement an automated system which matches the social security numbers of former participants in state educational and training programs with information in the files of state and federal agencies that maintain educational, employment, and United States armed service records and shall implement procedures to identify the occupations of those former participants whose social security numbers are found in employment records, as required by Specific Appropriation 337A, chapter 84-220, Laws of Florida; Specific Appropriation 337B, chapter 85-119, Laws of Florida; Specific Appropriation 350A, chapter 86-167, Laws of Florida; and Specific Appropriation 351, chapter 87-98, Laws of Florida.

(3) The Florida Education and Training Placement Information Program must not make public any information that could identify an individual or his employer. The Department of Education must assure that the purpose of obtaining placement information is to evaluate and improve public programs or to conduct research for the purpose of improving services to the individuals whose social security numbers are used to identify their placement. If an agreement assures that this purpose will be served and that privacy will be protected, the Department of Education shall have access to the unemployment insurance wage reports maintained by the Department of Labor and Employment Security, the files of the Department of Health and Rehabilitative Services that contain information about the distribution of public assistance, the files of Department of Corrections that contain records of incarcerations, and the files of the Department of Professional Regulation that contain the results of licensure examination.

230.23 Powers and duties of school board.--The school board, acting as a board, shall exercise all powers and perform all duties listed below:

(11) RECORDS AND REPORTS.--Provide for the keeping of all necessary records and the making of all needed or required reports.

240.209 Board of Regents; powers and duties.--

(3) The board shall:

(m) Establish and maintain an effective information system which will provide composite data about the university system and assure that special analyses and studies of the universities are conducted, as necessary, for provision of accurate and cost-effective information about the universities and about the system as a whole.

240.311 State Board of Community Colleges; powers and duties.--

(3) The State Board of Community Colleges shall:

(h) Establish an effective information system which will provide composite data about the community colleges and assure that special analyses and studies about the colleges are conducted, as necessary, for provision of accurate and cost-effective information about the colleges and about the community college system as a whole.

236.135 Equipment purchasing or leasing.--All moneys appropriated in the General Appropriations Act to the Department of Education are conditional upon each district school board, each community college board of trustees, or the Board of Regents securing prior approval from the Commissioner of Education before purchasing or leasing any electronic data processing equipment or software costing in excess of $25,000 in any 12-month period. In granting

approval, the commissioner must ensure that the software or equipment is compatible with the Florida Information Resources Network and that the costs of educational computing are reduced by making the best use of existing hardware and software. The commissioner shall give priority to improving information systems, with specific emphasis on common data definitions and data handling procedures which will provide analyses and reports utilizing data from school districts, community colleges, or state universities. Such development shall be carried out through a centrally coordinated and supervised effort.